

# AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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## AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, DECEMBER 7, 1833.

We would call attention to the advertisement on the last page of this number of the Journal, of the *American Steam Carriage Company* of Philadelphia.

**BALTIMORE AND OHIO RAILROAD REPORT.**—We are indebted to P. E. THOMAS, Esq. President of the Company, for one copy, and to an unknown friend for a duplicate, of the *seventh* annual report of the proceedings of this company, a part of which will be found in this number of the Journal. It will be continued in our next, together with such of the accompanying documents as we may deem of general interest. We have also received a report of the committee of the Charleston Railroad Company, on Cars, which will be noticed in our next.

**PATERSON RAILROAD OPENING.**—We regret having been unable to accept of the polite invitation from the President of the Company to attend the opening to Bergen, on the 29th ult., of the *Paterson and Hudson Railroad*. We, however, copy from the New-York American an account of the event, and shall take the earliest opportunity of visiting it, and again refer to it more at length. We cannot, however, omit to call attention to the bridges, a description of one of which we take from the New-York American. It was built, we understand, by Mr. Thomas Hassard, of Baltimore, who has also built several others upon the same plan on the Baltimore and Susquehanna, the Boston and Providence, and the Boston and Worcester

railroads. They are constructed upon the plan patented by Colonel Long, of the United States Army, a gentleman to whom this country is indebted for many important discoveries and inventions. We are promised a more particular description, with drawings of these bridges, which we shall take pleasure in laying before our readers; and we most cheerfully recommend Mr. Hassard to the notice of those who desire to construct works of a similar character.

"The bridge over the Hackensack, which is 1700 feet long, and which traverses the river diagonally, received and sustained the cars, travelling at a round trot, as solidly as the earth itself; so well and securely is it braced in all its parts, and yet presenting to the eye a structure remarkable for lightness of appearance. The draw—the first level one we remember to have seen—is most ingeniously contrived. When the passage is to be opened, a moveable platform of equal length with the draw, and constituting part of the road, is made to slide aside, and the draw takes its place. The machinery for effecting this is so simple, that a single man can do the whole. The draw in the bridge over the Passaic is lifted in a single piece; and as that is necessarily very heavy, being near thirty feet long, and of strong and well secured timbers, it would seem to require no trifling mechanical force to move it; yet, by means of a weight duly calculated, connected with the chains by which the draw is raised, but suspended at such a distance from the fulcrum as to furnish, as the bridge rises, a counterbalancing force to its weight, the whole mass is raised by a single man turning an ordinary crank."

**RAILROAD MEETING.**—The Dayton Journal says "We were highly gratified at witnessing the interest manifested by our citizens on the subject of railroads, at the meeting on Wednesday evening. It equalled our wishes, and even surpassed our hopes. The books were opened for subscription, and before the meeting adjourned, 811 shares were subscribed for. A committee of gentlemen were then named, to call personally upon such citizens as had not subscribed at the meeting, and receive their subscriptions, and 405 additional shares have been taken. The stock subscribed in the county at the first opening of the books previous to the survey of the route, amounted to 217 shares; so that the whole which has been taken in this county now amounts to 1432 shares, or \$71,850."

**TURNPIKE TO SYRACUSE.**—The road between this place and Syracuse, (says the *Pulaski Banner* of 23d November,) is a subject of general execration and complaint; and we are exceedingly glad to be able to announce that measures are about to be taken for its improvement. There is nothing which gives a place so bad an odor abroad, as impassable roads—and we are bold to say, that on the round face of Mother Earth, there can be found no other wrinkle so deep and so disgusting as the time-honored wrinkle between Pulaski and Syracuse. Every one will rejoice, therefore, that her ladyship's face, in this matter, is about to be overhauled and improved.

At a general meeting held at Central Square, Oswego co. on Saturday, November 9th, 1833, to take into consideration the propriety of establishing a turnpike from Syracuse to the village of Pulaski, William Ford, Esq. was called to the chair, and Edward M. Fitch appointed secretary. On motion of H. Fitch, it was resolved, That a committee, to consist of N. I. Roosevelt and Miles Hotchkiss, Central Square; John Leach, jun., Cicero; Erasmus Stand, and Benj. F. Williams, Salina; Elam Lynds and M. D. Burnet, Syracuse; Avery Skinner, Union Square; Hiram Hubbell, and L. D. Mansfield, Pulaski,—be appointed, whose duty it shall be to inquire into the practicability of constructing the above-mentioned road, and to take such measures as they may deem expedient to facilitate the object, and to make such report at the house of M. Hotchkiss, on Tuesday, the 3d of December, at one o'clock, P. M.

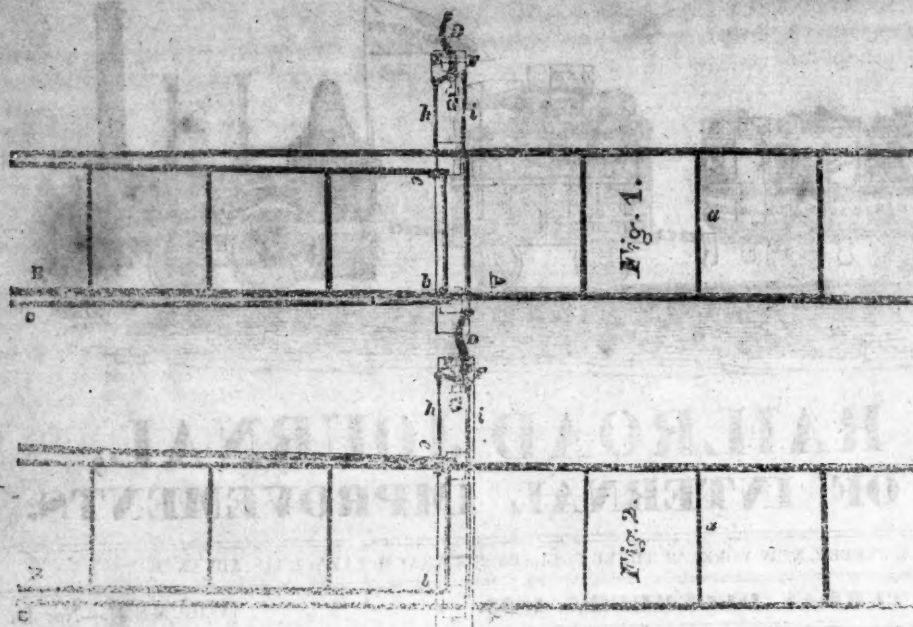
Resolved, That the secretary be authorized to apprise the above mentioned committee of their appointment.

Resolved, That said meeting adjourn to meet again at said place on Tuesday, December 3d, 1833.

Why a turnpike? Why not a railroad at once? As there *must* be a railroad within a few years, why not commence it at once? It is better to appropriate every dollar towards such a work as will be of lasting utility, than to construct a turnpike now, and then a railroad hereafter. Nothing short of a railroad should satisfy.

**Cotton in Florida.**—By a statement in the last Floridian we perceive that a great increase in the production of cotton is taking place every year. From two ports in Middle Florida, St. Marks and Magnolia, in 1825, 64 bales cotton were shipped. In the year from the 1st of July 1832, to the 1st of July 1833, 9675 bales were shipped from the same ports. This fact speaks for itself.





**Plan for Railroad Turnouts.** [Communicated by the Inventor for the American Railroad Journal, and Advocate of Internal Improvements.]

The advantages that this plan of turnout has over the various plans now in use consists in the great diminution of curvature, viz. instead of moving the portable end of the bars, A A, sufficiently to form a connection with the double track, which must be sufficient to give clearance to the flange of wheels between the rails, as in the present mode, the rails A A move only one inch, and, as per description of diagram, one rail of the turnout and one of the single track move alternately into its place, to form the required connection with the bars A A, and out of its place to give clearance to the flange of wheels; the objection to the bars *b* and *c* being loose at one end is overcome by the wheels taking a bearing upon the permanent rail of the track, laying alongside of and nearly parallel.

A A are the portable bars, or switches, on the single track; B B are bars of the same track; and C C are the bars terminating or commencing a double track. A A connects by means of cross rods *a a a a*, *b c* are connected by cross rods, and are portable at one end in like manner to A A; the cast iron arch G, the levers D E, and the vertical shaft F, are the apparatus for working the different bars by means of the connecting rods *h i*. It may be necessary to mention that E is a double lever, and the proportion from F to either end is as one is to three. *b* and *c* compose one bar of each track, and are connected to the long end of the lever E by the connecting rod *h*. A A form bars of both tracks according to their different positions, and are connected to the short end of the lever E by the connecting rod *i*. It will readily be perceived by a reference to the diagram that, by moving the lever D, fig. 1, in the position of D, fig. 2, D and E being both permanently fixed upon the vertical shaft F, which passes through the cast iron arch G, you will move the bars A A to connect with the double track, and at the same time move the bar *c* into its proper place, which, being connected with the bar *b*, is drawn out of its place, to give clear-

ance to the flange of the wheels, and by moving the lever D in the position of fig. 1, you bring A A back in their original position; you move *b* against the bar C in its working position, and move *c* out of its place to give clearance to the flange of the wheel. The bars A A have been calculated in the diagram to diverge one inch from a straight line, and by running the same curvature regularly from a tangent, the permanent end of the bar *c*, or C C, will diverge four inches from a straight line, that is, calculating the bars to be 16½ feet long by 2 inches wide, and will give 2 inches clearance for flanges of wheels and a curvature of a fraction over 2° 15'.

**On the Practical Effect of Undulating Railways.** By J. S. VAN DE GRAAFF. [To the Editor of the American Railroad Journal, and Advocate of Internal Improvements.]

Sir,—In several recent numbers of your Journal I have observed a controversy, taken from the London Mechanics' Magazine, upon the subject of undulating railways. To determine the motion of an ordinary car, when propelled by any given moving power, upon a given inclined plane, agreeably to the received laws of gravity and friction, is a problem strictly determinable by analytical computation, and it is a little extraordinary that such a subject should have remained so long a matter of dispute, and referred at last to experiment for decision. The object of the present article is to deduce such results from the mathematical principles of natural philosophy, as will easily guide the engineer to a correct judgment of the practical effect of such a railway; and in order to avoid all those disputes which have arisen from the loose and unscientific method of reasoning hitherto given upon this subject, I must begin by demonstrating the theorems upon which the decision of the question will depend.

#### THEOREM I.

When railroad cars of the usual construction are in motion upon straight inclined planes, whether they be descending by the force of gravity, ascending by the force of inertia, or propelled by any moving power: I say, the resistance to motion, arising from the friction of

their axles, will vary in the direct ratio of the cosines of the inclinations of the planes; the weight of the cars and all other things being equal.

For in ordinary railroad cars there is no rubbing surface intervening between the point where the moving power is applied, and the point where its action takes effect upon the load; and, therefore, when such cars are drawn upon an ascending plane, the nominal pressure is that alone which is subject to any rubbing friction at the axle, with the exception only of the small force required in giving motion to the wheels and axles themselves. And in like manner the same thing may be shown to be true when the car is descending by the force of gravity, or ascending by the force of inertia; and hence the only sensible friction at the axles, in every case, will be that which arises from the normal pressure alone, and which will be proportional thereto. But the normal pressure varies as the cosine of the inclination of the plane: see Courtney's Treatise on Mechanics, art. 265, "therefore, when railroad cars of the usual construction," &c. &c. Q. E. D.

**Corol. 1.** And hence the friction at the axles will offer a reduced resistance to a moving power when the car is situated either upon the ascending or descending plane; but the horizontal and undulating ways are upon perfect equality as far as the accelerative force of gravity is alone connected, and it therefore follows, that any moving power considered separately from the effect of gravity, will act upon the undulating line with an effect greater than upon the horizontal line, in the given ratio of radius to the cosines of the inclination of each plane.

**Corol. 2.** But agreeably to the principles of trigonometry, the cosines of all arcs near the commencement of the quadrant will differ but little from radius, and the utmost practical limit of inclination must for many reasons fall within these arcs; and it therefore follows that the available reduction of friction by means of an undulating road cannot be of any practical utility in transporting upon railways. It would require an inclination of 25° 50½' to reduce the friction at the axles even one-tenth part less than upon a horizontal road; and such an inclination it is very well known would be attended with difficulties in the practical use of the road, which would be much more formidable than the friction at the axle itself.

**Scholium.** The above reasoning will obtain in reference to cars of every description when they are made to ascend a plane by the force of inertia only. But when a car is made to ascend a plane by a force different from inertia, it becomes necessary particularly to discriminate the points where the power is first applied, and where it takes effect upon the load; and it is a neglect of this consideration which has led into error a writer whose signature is S. D. page 674, of this Journal, when he supposes the friction at the axle to be a different quantity when the car is ascending and descending. All that is here said must be understood in reference only to cars whose construction is such as to give no rubbing surface intervening between the point where the power is applied and the point where its action takes place upon the load. The ordinary railroad car is of this description. But it will be easy to see that, with respect to a locomotive engine car, the case will be very different as far as the axle of the propelling wheels is concerned; for the friction of the bearings of the axle will be less when the engine is travelling upon a level road than when climbing a plane of any inclination. Nevertheless, the friction at the axle of the propelling wheels upon the plane will be less than when the engine is drawing a weight



upon a horizontal road, which requires a force of traction equal to the gravity of the engine upon the plane.

In connection with the subject of undulating railways there remains yet another principle to be considered. That is, the whole effect of the reduced friction of the axle upon the straight parts of the planes, as explained in the preceding theorem, will not be in all cases retained in passing the concave surface connecting the two planes; for unless the velocity of the car upon the curve be below a certain determinate limit, the whole quantity of motion destroyed by friction, in passing over the whole length of the curve, will exceed the quantity which would be destroyed in moving over the corresponding distance upon the horizontal road. This I now proceed to demonstrate.

## THEOREM II.

*When descending and ascending straight planes are connected together by a given concave circular surface: I say the motion of a car in passing from the descending to the ascending plane, will be impeded by an increase of friction at the axle, which will be in a direct duplicate ratio of the velocity of the car.*

For, the increase of friction at the axle will be proportional to the increase of pressure upon it; but the centrifugal force upon the curve is a normal pressure, which varies in a duplicate ratio of the velocity. Therefore when descending and ascending straight planes, &c. &c. Q. E. D.

*Corol. 1.* It therefore appears that the friction at the axle of the arc, when situated in the middle of the connecting curve, will be greater than the friction at the axle when the car moves upon horizontal rails, and this will be more the case as the car moves with greater velocity.

Such are the principles which must guide the engineer in an investigation of the effect of the proposed system of undulating railways. And in order to determine under what circumstances the ultimate amount of power consumed by friction upon the two planes and intermediate curve, is greater or less than the whole amount consumed by friction in moving over the corresponding distance upon the horizontal road, it would be necessary to enter into a minute analytical investigation of the circumstances under which the quantities of motion destroyed by friction in the two cases are equal. The principles of the differential and integral calculus will lead to this investigation without difficulty by means of the theorems given above, and which, therefore, for the sake of brevity, I may omit, for the results already given are sufficient to show that a material reduction of friction cannot be obtained by the undulating plan of construction, without using planes whose inclinations are altogether inadmissible in the practical use of railways.

Although the chief object of the above investigation was an inquiry into the effects of an undulating railway, yet it may be observed, that by means of the principles here demonstrated, it will be easy to deduce more accurate formulas for determining the amount of power required in moving railroad cars up an inclined plane, than has hitherto been given by Mr. Wood, and other writers.

Very respectfully,

J. S. VAN DE GRAAFF.

Lexington, Ky. Nov. 15, 1833.

*Seventh Annual Report of the President and Directors to the Stockholders of the Baltimore and Ohio Railroad Company.*

In presenting to the Stockholders of the Baltimore and Ohio Railroad Company, their Seventh Annual Report, the Board of Directors deem it proper to refer to the situation of the Company's affairs at the date of their late communication. On the 1st of October, 1832, when that communication was made, the main stem of the road had been completed, with two tracks as far as the Monocacy river, and with a single track to the Point of Rocks on the Potomac; a lateral road with a single track had

also been finished from the Monocacy to the city of Frederick. Between the last named place and Baltimore, there had been, with but few interruptions, a transportation of persons and merchandize, from the 1st of December, 1831; and from the Point of Rocks to Baltimore, the transportation had commenced on the 1st of April, 1832. The experience which the construction and use of the road had afforded when the Sixth Annual Report was made, justified the Board of Directors in assuring the Stockholders of their entire confidence in the final success of the work. The practicability of applying steam power profitably, for the purposes of general transportation, had been satisfactorily ascertained; the efficiency of the railroad system, in the particular district of country, had been put beyond all doubt; and new sources of revenue to the Company, not contemplated by the original projectors, had been fully developed as the adjacent quarries were opened, and the forest felled, and the railroad was employed in the transportation of their respective products. Under these circumstances, there was evident cause for congratulation upon the results that had so far been obtained: but the Board saw that much was still to be done before those pecuniary advantages could be realized to the Stockholders that had originally anticipated, and the postponement of which, had, even now begun to create feelings of disappointment in the minds of many of the friends of the scheme.

Three objects, in particular, called for the immediate attention of the Board of Directors at the commencement of the official year, that has just ended. 1. The extension of the Railroad to Harper's Ferry. 2. The construction of the lateral Railroad to Washington; and 3. The perfection of the application of steam power for the purposes of transportation, together with the subject of machinery generally. All of these, it was considered, were most closely connected with the pecuniary interests of the Stockholders, and the detail of what has been accomplished in regard to them will occupy the largest portion of their present report.

1. *The Extension of the Railroad to Harper's Ferry.*—The Stockholders are already familiar with the particulars and result of the long pending controversy between the Railroad and the Chesapeake and Ohio Canal Companies, for the right of way upon the left bank of the Potomac. The decision of the Courts in favor of the latter corporation was followed by tedious negotiations, which partook, at first, perhaps of the feelings that had grown up during the legal proceedings, and which brought the parties again into collision before the Legislature of Maryland, their common parent. Time, however, and a better and more correct view of their true interests than had before been taken, led ultimately to a compromise, by which the Canal Company undertook, upon the payment by the Railroad Company of the sum of \$266,000, in monthly payments, to construct the Railroad along all the difficult passes between the Point of Rocks and Harper's Ferry. The payments and the construction have both been commenced by the respective parties; the whole length of the road between the two places has been advantageously located; and there is every reason to believe, should no unfavorable circumstance arise to retard the work, that, by the first of January, 1835, it will be completed to Harper's Ferry. The arrangement thus made was one which, under all circumstances, was unavoidable; and it is with gratification that the Board are enabled to inform the Stockholders, that they feel confident the conditions of the agreement will be carried into effect by the Canal Company with a liberal and friendly disposition to render every accommodation to the Railroad that may be found compatible with the interests of their own work. The Canal Company were, at the time of the compromise, the exclusive possessors of the only practicable site for a railroad at the narrow passes, with a title obtained after protracted litigation, and with power to demand their own terms: but in

those which have been acceded to, the Board do not perceive that more will be paid than sufficient fully to cover, as was intended, the cost of constructing those portions of the Railroad which the Canal Company have undertaken to do, and the loss and damages to which the Canal must, while such construction is going on, necessarily be subject; certainly not more than the Railroad Company must have paid, had they undertaken the independent construction of the road at the same places. To the Railroad Company, the advantages to be expected on reaching Harper's Ferry were such as to render the continuation of the road to that place a matter of primary importance, demanding every effort to accomplish it. The Winchester and Potomac Railroad, about thirty miles in length, and terminating at Harper's Ferry, promised to transfer to the Baltimore and Ohio Railroad, to be conveyed to Baltimore, a great share of the produce of the rich valley of Virginia, which then found an outlet in other directions. Winchester itself, a large, thriving, and enterprising town, would be brought into the closest connection with Baltimore, to the mutual advantage of both cities. Staunton, one hundred miles from Winchester, in the same great valley: the intervening distance admirably adapted to the construction of a Railroad, would, in all probability, soon become another point in the line of railway communication, under a charter already in existence; nor was it anticipating too much, to believe that, thus progressing through the individual enterprise, from point to point, the prolongation of the Baltimore and Ohio, and the Winchester and Potomac Railroads, would either continue south westwardly to the cotton growing districts of Tennessee, intersecting the proposed James River and Kenawha Railroad, or passing through Jennings's Gap, find its own way to the tributaries of the Ohio, completing, in either event, the great scheme of a union, by railways, of the waters of the Atlantic sea board with those which empty themselves through the Mississippi into the Gulf of Mexico. In the meanwhile, it was known, that Virginia was engaged in making an excellent road from Winchester, direct to Parkersburg, at the mouth of the Little Kenawha, on the Ohio, which, uniting with the Railroad at Winchester, would turn the tide of western travelling into that direction, and extensively attract to the Baltimore and Ohio, and the Potomac and Winchester Railroads, the transportation of persons and merchandize, as well as produce, which then went in other channels. Besides the advantages thus held out by the valley of the Shenandoah, on the completion of the Railroad to Harper's Ferry, it would be, at that place, in such close proximity to the Valley of the Conococheague, as to render a connection with the latter, and through it, with some of the most fertile parts of Pennsylvania, a matter of easy attainment, by which a still further amount of transportation would accrue to the road, with but small additional expense necessary to accommodate it, and which would increase the profits of the Stockholders. In addition to which, the Railroad Company, at Harper's Ferry, would still be upon the line of western communication, originally contemplated by the Valley of the Potomac, whenever circumstances made it expedient to advance in that direction. Nor, while a part of the advantages here enumerated were secured by the actual construction of the Potomac and Winchester Railroad, and the turnpike to the Little Kenawha, were the rest of them either improbable or remote. While railroads were extending themselves throughout the union, in every direction, through districts promising fewer advantages than the valleys of the Shenandoah and Conococheague, there could be but little doubt but that these last would speedily possess them. Under these circumstances, therefore, and with a view to ulterior objects, not less than to immediate pecuniary advantages, the Board felt that they were called upon to secure, by every effort, the continuation of the road to



Harper's Ferry, and in doing so, they believe that they have discharged one of the most important of the trusts committed to them.

(To be continued.)

[From the New-York American of Nov. 30.]

**OPENING OF THE NEW YORK AND PATERSON RAILROAD.**—Yesterday, the route of this road, which is now complete from Paterson to the Bergen Ridge, was thrown open, and traversed by a large party invited by the directors of the company to witness the successful accomplishment thus far of their labors. Leaving Powles Hook about half past nine o'clock in stages, we were rapidly conveyed to the ridge, distant about two miles and a half, where cars drawn by horses were in waiting. In and on these—for they are constructed to carry outside as well as inside passengers—the party, reinforced by many gentlemen of New Jersey, who there joined them, proceeded leisurely, that is at the rate of about ten miles an hour, along the road. It passes for about five miles over the Newark salt marshes, above which it is raised upon an average four feet, until after passing Berry's creek, when it begins to ascend at the rate of thirty five feet per mile, until the embankment reaches a height of eighteen feet. Great obstacles have been overcome in constructing this road: first, the carrying such an immense quantity of earth; the uncertain bottom in many spots; the number of small creeks, in addition to two large rivers, to be passed; and therefore the necessity of bridging to a great extent, and in such way as both to preserve the requisite level and to obtain the firmness and solidity of structure essential to safety. In all these respects, the company appear to us to have fully succeeded. The bridge over the Hackensack, which is 1700 feet long, and which traverses the river diagonally, received and sustained the cars, travelling at a round trot, as solidly as the earth itself; so well and securely is it braced in all its parts, and yet presenting to the eye a structure remarkable for lightness of appearance. The draw—the first level one we remember to have seen—is most ingeniously contrived. When the passage is to be opened, a moveable platform of equal length with the draw, and constituting part of the road, is made to slide aside, and the draw takes its place. The machinery for effecting this is so simple, that a single man can do the whole. The draw in the bridge over the Passaic, is lifted in a single piece; and as that is necessarily very heavy, being near thirty feet long, and of strong and well secured timbers, it would seem to require no trifling mechanical force to move it; yet, by means of a weight duly calculated, connected with the chains by which the draw is raised, but suspended at such a distance from the fulcrum as to furnish, as the bridge rises, a counterbalancing force to its weight, the whole mass is raised by a single man turning an ordinary crank.

After stopping at, and examining, each of these bridges, the party proceeded to Paterson, where they spent some very agreeable hours. Having visited the falls, which happened to be even more picturesque than usual by reason of the high water in the river, they partook of a collation at the office of the Company.

After the entertainment—we borrow the language of the Journal of Commerce—Mr. Daniel Jackson of N. Y., gave the health of the President of the Paterson Rail Road, which drew from the President, the Hon. Ph. Dickerson, a succinct statement respecting the enterprise which had just been completed. He said that somewhat more time and money had been expended than it was at first supposed would be necessary. But the estimates were made when such works were more a novelty in our country than they are now, and he thought that those who were correctly informed, would now rather wonder that the road had been completed so soon, than that it had not been completed sooner. Some unexpected obstruc-

tions had been found in the ground, over which the road was to pass. The extent of the contracts, and the distant part of the world from which the various materials were to be brought together, necessarily required time. The rails were to be procured from Georgia, some other materials from the interior of the State of New York and Canada, the iron from Liverpool, the contractors from New England, the laborers from Ireland, and the money from the city of New York. On the whole, he thought there was reason for congratulation in reviewing the history of the enterprise. He concluded by giving "the City of New York, the heart of our Country." Mr. Charles King, at the request of the New York Gentlemen present, made a few remarks in reply, and gave, "Paterson, here nature and art conspire to give to industry an ample reward."

We have been politely furnished by Colonel LONG, with the following tables and explanations, showing the performance of engines of different capacities, on different grades, at different velocities and with different loads, which we submit to our readers without having had leisure to examine, or even to read them. They will, however, lose none of their value on that account, as the source from whence they come will insure them attention.

TABLE I.—Performance of a four ton engine on different grades, at different speeds, and with different loads.

State- ments.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
speed	level	5 ft	10 ft	15 ft	20 ft	25 ft	30 ft	35 ft	40 ft	45 ft	
miles	tons	tons	tons	tons	tons	tons	tons	tons	tons	tons	tons
No. 1 slow	60	49	44	36	32	29	26	24	22	20	18
2	5	30	24	21	18	16	14	13	12	11	10
3	10	28	23	19	17	15	13	12	11	10	9
4	15	25	20	17	15	13	12	11	10	9	8
5	20	20	16	14	12	10	9	8	7	6	5

TABLE II.—Performance of a five ton engine on different grades, at different speeds, and with different loads.

State- ments.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
speed	level	5 ft	10 ft	15 ft	20 ft	25 ft	30 ft	35 ft	40 ft	45 ft	
miles	tons	tons	tons	tons	tons	tons	tons	tons	tons	tons	tons
No. 1 slow	76	63	54	46	41	37	33	31	27	26	23
2	5	38	31	27	23	20	18	16	15	13	12
3	10	35	29	25	21	19	17	15	14	12	11
4	15	32	26	22	19	17	15	14	12	11	10
5	20	25	21	18	15	13	12	11	10	9	8

TABLE III.—Performance of a six ton engine on different grades, at different speeds, and with different loads.

State- ments.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
speed	level	5 ft	10 ft	15 ft	20 ft	25 ft	30 ft	35 ft	40 ft	45 ft	
miles	tons	tons	tons	tons	tons	tons	tons	tons	tons	tons	tons
No. 1 slow	96	79	67	58	52	46	42	38	35	32	28
2	5	48	39	33	29	26	23	21	19	17	16
3	10	44	36	31	27	24	21	19	17	16	15
4	15	40	33	28	24	21	19	17	16	14	13
5	20	32	26	22	19	17	15	14	12	11	10

#### Explanations of the Tables.

The computations exhibited in the foregoing tables, relate to the performance of engines of different weight, and to various other circumstances intimated in the titular heading of each table.

The vertical column, headed col. 1, exhibits the rate of speed in miles per hour for which the computations provide. The other columns headed col. 2, to col. 11, inclusive, exhibit the grade of the road, ascending, in feet per mile, together with the gross load expressed in tons and parts, that may be conveyed upward, at the various rates of speed presented in col. 1.

The statements are exhibited in series running from left to right, through all the columns of the tables, and are numbered from 1 to 5 on the left of each table. The different statements relate to the different rates of speed exhibited in col. 1, varying from a speed of 2 to 3 miles per hour, which is designated in the tables as "slow," to a speed of 20 miles per hour.

The steam pressure or elasticity contemplated in all the computations, is 30 pounds to the square inch; the effective force of which, in producing locomotion, at the lowest rates of speed, is estimated at 33 1-3 per cent. of that pressure.

The series of statements designated No. 1, in each of the tables, exhibits the effective performance as

just mentioned, without regard to the condition of the road, with respect to the adhesion between the rails, and the wheels of the engine. This performance can only be expected when the road is in a condition to afford the requisite adhesion. With the steam power here contemplated, the wheels will be liable to slip on the rails, when the latter are covered with mud, frost, or snow; but in the best state of the road, such a performance may be effected.

The other statements exhibit the efficiency of the three classes of engines, which may safely be counted on, in all states of the road and weather, frost and snow excepted; it being always understood that the road must be well made, and free from abrupt curvatures.

An inspection of the tables will show the loads that may be drawn on a level road, at different rates of speed, as also, the loads that may be drawn upward on acclivities, and at different rates of speed, and by traversing either table diagonally, the approximate load that may be drawn on a road of various grades from a level, to 45 feet per mile, may be found; for example, let it be required to determine the load that may be drawn upward on a road varying in its grades, from a level to 45 feet per mile, by an engine weighing five tons.

In Table No. II, statement No. 2, and col. 11, we have 13 tons drawn upwards, at the rate of 5 miles per hour, on an ascent of 45 feet per mile. In statement No. 3, and col. 10, of the same table, we have 12.9 tons, or about 13 tons, drawn at the rate of 10 miles per hour, up an ascent of 40 feet per mile. In statement No. 4, col. 9, we have the same load, at a speed of 15 miles per hour, up an ascent of 35 feet per mile, and in statement No. 5, col. 6, we have a little more than 13 tons, drawn at the rate of 20 miles per hour, up an ascent of 20 feet per mile. In the same table, we find in statement No. 1, col. 11th, that a five ton engine, when the road is favorable, is able to draw up an ascent of 45 feet per mile, 26 tons; and it may be readily inferred, that it is able to draw upwards on more moderate acclivities, the same load, at increased rates of speed.

By an inspection of Table III, it will appear, that a six ton engine is able to draw upward, on a road ascending, at the rate of 45 feet per mile, a gross load of nearly 33 tons at a slow speed, also that with nearly the same load, viz.: 32 tons, the engine is able to travel at a speed of 20 miles per hour on a level road.

It should moreover be remarked, that all the statements except No. 1, of each table, are considerably within the limits authorized by the power of adhesion between the wheels and the rails, even in the worst state of the road, frost and snow excepted.

The American Steam Carriage Company feel warranted in assuring the public, and especially those companies or individuals who may favor them with orders for Locomotive Engines, that the foregoing conditions shall be punctually complied with, and that the performance of their engines shall be equal to those exhibited in the tables herein contained.

The subjoined testimonials will explain more fully the character and performance of the engines which this company propose to build.

There is much truth in the following remarks from the Philadelphia Commercial Herald,—and unless the citizens of New-York arouse themselves, the "Empire State" will indeed pay heavy tribute to Philadelphia, and Baltimore.

**PENNSYLVANIA.**—In the hard march of Internal Improvements, which is daily producing such wonderful effects upon the prosperity of our country, Pennsylvania took the lead. Her distinguished citizen, Robert Morris, more than forty years ago, pointed out the advantages to be derived from this quarter, and projected nearly all the important improvements which the enterprise of a subsequent generation has now nearly completed. Influenced by his arguments, Pennsylvania commenced a system of Canals, designed to connect the Delaware with the Susquehanna, the Ohio, and the Lakes, long before the subject of Internal navigation had been seriously thought of in any other state. But "the race is not always to the swift." The first experiments failed, because they were in advance of the information, enterprise and resources of the times in which they were undertaken. Discouraged by this result, Pennsylvania fell back from that leading position which nature had assigned her, and which



New-York, under the auspices of her Clinton, soon after occupied.

The Grand Canal from the Hudson to Lake Erie was completed in spite of the deepest prejudice and the most persevering opposition, and no sooner was it opened, than the wisdom which had planned, and the patriotism which had carried it into successful operation, were universally admitted and admired.

The success of this magnificent enterprize led Pennsylvania once more to reflect upon her internal resources, and to appreciate the permanent advantages of her natural position. She has again entered the glorious race of improvement, and has put forth her giant energies to secure the victory. Will not that victory be hers?

An answer to this question is contained in the Toast which we remember to have heard from the lamented Clinton, on the occasion of the commencement of the Chesapeake and Delaware Canal. Speaking of the immense natural advantages of Pennsylvania, he described her as resting "with her foot upon the Ohio, and with the other upon the great Lakes." To this he might have added,—that stretching her broad arm of the Susquehanna into the most fertile districts of the State of New-York, and holding in that hand the key of communication with the great Erie Canal, she has the means of rendering a large portion of the "Empire State" tributary to her wealth.

In *Geographical* advantages for securing the commerce of the Great West, Pennsylvania stands unrivalled. New-York has an admirable communication with the Lakes,—but her high northern position deprives her of its advantages during a large part of the year. Virginia, by the Potomac, may communicate with the Ohio,—but she wants a market on the sea-board, and has physical obstacles to encounter, certainly beyond her present resources.

It is Pennsylvania only, which, by a single line of communication, developing a great portion of her internal resources, can embrace also the unbounded water communications of the Ohio, the Mississippi, and the great Lakes. This object is now on the verge of being accomplished. Nine-tenths of the cost has already been incurred.

Let the system as originally laid out, including the improvement of the north branch of the Susquehanna to the New-York line, be completed, and the single addition of a connection with the Ohio Canal be made, and the hopes of the most sanguine must be realized.

The aggregate of tolls received from the Schuylkill, Lehigh, Union, and the unfinished State Canals, and from the west branch of Schuylkill, Little Schuylkill, Mount Carbon, and Germantown Railroads, for the present year, thus far, has been \$785,000. Hence some idea may be formed of the revenue the whole system will yield when completed.

**INTERNAL IMPROVEMENTS.**—We take the following account of the proceedings of a meeting of the inhabitants of the counties on the line of the contemplated canal, from Rochester to Olean. There appears to be a determination on the part of those residing near its contemplated route, to push it forward, and they will, we trust, succeed; as we deem the construction of *Canal and Railroad* banks, when judiciously and properly constructed, of far more importance to the country than *banks* of any other kind.

**CANAL MEETING.**—At a large and respectable meeting of the citizens of the counties of Cattaraugus, Allegany, Steuben, Livingston, Genesee, and Monroe, held at the court house, in the village of Genesee, on the 20th day of November, 1833, for the purpose of adopting measures in furtherance of the construction of the Rochester and Olean Canal, with a branch

to the village of Dansville; the Hon. James McCall, of Allegany, was appointed President; and George Williams, and James Faulkner, Esqs. were appointed Secretaries.

When the following resolutions were presented by the Committee, and unanimously adopted by the meeting.

Resolved, That the object of the meeting is to harmonize with the people of Allegany and other places along the line of the contemplated route of the canal, in the object prayed for in their several memorials, with the additional recommendation of a short branch to the village of Dansville, by the valley of the Canaseraga.

Resolved, That it is the deliberate opinion of this meeting, that since the construction of the Erie and Champlain Canals, no route has been designated, which, in its bearings on the great interests of the State, in the extent to which its influence will be felt, and the financial returns which may be reasonably calculated upon, can compare with that now under consideration.

Resolved, That we cannot reconcile it to our ideas of duty to ourselves, or the State we live in, not to manifest an interest in the busy movements of our enterprising neighbors, Pennsylvania and Maryland, whose zeal and energy are untiring and unabated, and whose eyes are steadily fixed on the growing interests of Baltimore, and Philadelphia.

Resolved, That it be recommended to the several counties embraced in the object of this meeting, to call county meetings to provide the funds and send a delegate to the next Legislature, to further the general object of this meeting.

Resolved, That James McCall, George Williams, and George Mills, in the county of Allegany; Emery Wood, Henry Bryan, and F. S. Martin, in the county of Cattaraugus; Benjamin Gardiner, J. P. Landon, and M. Stoddard, in the county of Genesee; D. H. Bissel, James Faulkner, and Eli Hill, in the county of Livingston; and A. M. Schermerhorn, F. M. Haight, and Powell Carpenter, in the county of Monroe, constitute a county Committee, in their respective counties, to promote the circulation of a memorial to the Legislature, and that such Committee be authorized to appoint sub-committees in the several towns in their several counties, for the same purpose.

Resolved, That the proceedings of this meeting be published in all the papers in the several counties interested in the contemplated Canal, and in the cities of New-York and Albany.

JAMES MCCALL, Pres't.  
P. C. FULLER, V. Pres't.

GEO. WILLIAMS, }  
JAS. FAULKNER, } Secretaries.

WARREN, NOV. 21, 1833.

**CANAL CONVENTION.**—This body (says the Western Reserve Chronicle) adjourned on Friday last, sine die, after a session of three days. We cannot often witness, in this section of the country, an assemblage embodying so great a share of talents and acquirements, or representing so large an amount of capital.

The deliberations were conducted with skill, promptness and dignity; and every fact, having any relation to the great object that occasioned this meeting, was, as far as practicable, elicited and investigated.

We can assure our readers, that the subject of forming an union between the Pennsylvania canals is now taken up in earnest; and we believe that our trade is about to be diverted to a more convenient, more natural, and more profitable, than that to which, for the last eight years, it has been artificially directed.

The delegates from the counties and cities of Philadelphia, Alleghany, and Pittsburgh, left here on Saturday, and were accompanied by several from Beaver, Trumbull and Portage, for the purpose of examining the route of the Mahoning canal from this place to Akron. From thence they will proceed to the routes of the Beaver and Sandy canal, and of the Massillon railroad; which, having examined, they will direct their course to Pittsburgh, where

they will make out their report, which will designate one of the three as the most feasible and as uniting the most advantages. This decision will probably be considered as final, by all the parties concerned; and we hope that thereafter the efforts of the people of Pennsylvania and Ohio will be unitedly exerted in favor of the fortunate one, until it shall be completed.

Nov. 13, 1833—11 o'clock, A. M.

The convention was organized by Gen. Simon Perkins taking the chair, and the Hon. Wm. Rayen and R. P. Spalding, Esq. acting secretaries pro tem.

The objects of the meeting were explained by the chairman.

Gen. Abner Lacoek was unanimously elected chairman: Zalmon Fitch, Esq. and Hon. Calvin Pease, secretaries.

The following, among other resolutions, were adopted by the meeting:

Resolved, That a committee, consisting of two persons from each county represented in this convention, be appointed by the respective delegates thereof, to report to this meeting a statement of facts in relation to the proposed union of the Pennsylvania and Ohio canals; presenting, in a concise manner as possible, the advantages resulting from such connexion to the commerce of the western country generally: its vast importance to the state of Pennsylvania, and the cities of Philadelphia and Pittsburgh; and the prospect it offers to capitalists, for a profitable investment of money.

Resolved, That a committee of five be appointed to examine the charters of the several companies authorised to effect a junction between the Pennsylvania and Ohio canals, and report upon the safety with which immediate measures may be taken, under the existing provisions, towards effecting the object in view.

Resolved, That a committee of five members from the counties of Trumbull and Portage, be appointed, whose duty it shall be to collect all such statistical information as may have a bearing upon the operations of a canal to unite the Ohio and Pennsylvania canals; and if required, to communicate the same, from time to time, to the delegates to this convention, from the state of Pennsylvania.

Resolved, That the president and secretaries be directed to transmit the proceedings of this convention, together with the reports of the various committees, to the governors of Ohio and Pennsylvania, requesting that the same be laid before the legislatures of the respective states for consideration.

"The tower of Pisa, in Italy, leans sixteen feet out of the perpendicular, so that strangers are afraid to pass under it; but as the plummet or line of direction falls *within its base or foundation*, it is in no danger of falling, if its materials keep together; and hence it has stood in this state three hundred years. But were an additional erection, of any considerable elevation, to be placed upon its top, it would undoubtedly soon tumble to ruins."

"Were the number of such persons increased but a thousand-fold, so that for every twenty scientific investigators now existing, twenty thousand were employed in surveying the various localities, aspects and operations of nature, in the animal, vegetable, and mineral kingdoms, on the surface of the earth and the ocean, and in the celestial regions,—*hundreds* of new facts would, in all probability, be brought to light, for one that is now discovered by the present contracted circle of scientific men, from which new and important conclusions in the arts and sciences might be deduced."

**Great Cargo.**—The ship Braganza has arrived a New Bedford with a cargo of 4300 barrels of sperm oil, the greatest quantity that we recollect having been brought in by any previous arrival.



*National Gallery of Practical Science, London.* [From the Repertory of Patent Inventions for August, 1833.]

It is surprising, amongst the numerous scientific institutions which are so liberally supported in this country, that till within a short period there should have been none which had for its express object the advancement of mechanical science. We had long considered that an institution of this character would meet with the most extensive support, and are not disappointed, for in our visits to the *National Gallery of Practical Science* we daily meet with some new subject for our consideration, though we have constantly to elbow our way to any object which we are desirous of examining, particularly should our visit be late in the day.

Several subscription *soirees*, under the patronage of His Royal Highness the Duke of Sussex, have also been held at this institution. On each evening, a conversation on some practical application of the sciences has been given; in addition to which, numerous models, and other subjects of interest, were arranged in various parts of the gallery. At some of these meetings we had the pleasure of being present, and cannot but congratulate the managers in having broken through the barrier which heretofore excluded ladies from joining these highly intellectual treats.

The object of this institution is to afford every possible encouragement and facility for the practical demonstration of discoveries in natural philosophy, and for exhibiting new applications of known principles to mechanical contrivances of general utility. In pursuance of these objects, several highly valuable and interesting experiments have already been tried; amongst others, may be mentioned a series of experiments on the production of high velocities to track-boats, such as have been some time in use on the Paisley canal. It had been stated, though not generally believed, that these boats, when caused to travel at a speed of from ten to twelve miles the hour, did not offer so much resistance as when travelling at lower speeds; this soon became a question of great importance to every engineer, as well as others; more particularly to those who were directly or indirectly interested in canal property, and hence an extensive experiment was gone into, under the superintendence of Mr. Telford, aided by other eminent engineers. The canal in the national gallery offering every convenience, the results were satisfactory, and will be highly useful in improving this description of conveyance. It was proved that, by the application of means to produce high speeds to these boats, they have a tendency to rise to the surface and displace less water, and consequently do not require a greatly increasing power to propel them as was generally considered. These experiments afterwards led to one of the Paisley boats being brought to the Paddington canal, and a continuation of experiments on the large scale. This boat was drawn by fast horses at the rate of from ten to fifteen miles the hour, and similar results were obtained as upon the smaller scale; and we believe that all parties were satisfied, that a speed of at least twelve miles an hour on our canals will soon become general, though we do not consider that horses will be so well adapted to this purpose as fixed engines.

There have also been a series of experiments made in respect to the application of undulating railroads, according to the pro-

position of Mr. Badnall. We were not present at any of the trials, but in our last number we gave our opinion of what might be expected to result from such an application. We have mentioned these two experiments in the first place, because they are not mentioned in the catalogue, to which we will now turn, taking the different subjects according to their numerical order.

**No. 1. Newly discovered System of generating Steam.** By Jacob Perkins.—This very simple yet beautiful system of generating steam, is, we understand, getting into use in fixed engines, in steamboats, and has been tried for a length of time on the Liverpool and Manchester railroads, with every prospect of the most decided success. The average distance which the locomotive carriages travel, before the tubes of the boiler are destroyed, is about 3000 miles. The carriage in which Mr. Perkins' system of circulation is applied, has travelled upwards of 20,000 miles without the tubes giving way. In consequence of these results, the directors have caused two new carriages to be constructed, which are to be in every way alike, excepting that to one is to be added the plates to produce the circulation of the water. The working of these two carriages will determine, in a great measure, the value of Mr. Perkins' invention, as applied to this description of boiler. But this principle of generating steam is also extensively applicable in the production and manufacture of spirits, sugar, salt, indigo, soda, soap, and other articles depending on ebullition with continuous circulation.

**No. 2. Steam Gun.** By the same.—We recommend our country, as well as our town readers, to take the first opportunity to see this destructive engine: nothing can better exemplify the powers of steam. This instrument is capable of throwing, in any direction, a stream of seventy balls in four seconds, with a strength equal to gunpowder.

**No. 3. Combustion of the Hardest Steel.** By the same.—A disc of soft iron, to which motion is given by a steam engine, attached to the boiler of the steam gun, is turned with a velocity of 5,400 revolutions in a minute; and by placing a file, or other piece of the highest tempered steel, in contact with the periphery of the disc, the friction caused by the soft iron destroys or cuts the steel, producing thereby a brilliant and beautiful combustion.

The peculiar result produced by this instrument is very interesting. A machine on similar principles has lately been patented for cutting and grooving marble, by the use of a circular disc of soft metal, which revolves with immense velocity.

**No. 4. Compression of Water.** By the same.—An apparatus which, by hydrostatic pressure, compresses water to an extent equal to a fourteenth part of its volume. The force employed is equivalent to a pressure of 30,000 lbs. to the square inch, and is applicable to other liquids.

In most of our works on natural philosophy water is treated as incompressible and non-elastic; by this apparatus the opposite of these two propositions is clearly shown. There was considerable difficulty in getting a vessel capable of resisting so high a pressure; and the chief feature of this instrument is the manner of constructing the cylinder, which is formed of a series of concentric tubes; thus the inner or smaller tube is first formed by welding, and is turned accurately on the outer surface; the next

tube is then formed, and is accurately turned on the inner surface, and the bore of this second or outer tube is just too small to receive the first tube; but in order that it may do so, it is heated, till, by expansion, it is capable of receiving the first tube within it, and in cooling, the second tube shrinks on the first tube, and strongly embraces them together; a third tube, a fourth, and so on, are similarly put on till a cylinder is produced capable of withstanding any extent of pressure.

**No. 5. Steel Engraving, and Unlimited Transfer or Reproduction of the Subject or Design.** By the same.—Some of the most beautiful and highly finished engravings of the present day are produced by the exercise of this invention; to effect which a steel plate is first softened to such a state of ductility as to permit the engraver to use the finest tools with nearly the same ease as on a copper-plate. When the design is finished, the plate is hardened by a process of carbonization, and it is then not only available to the production of a hundred times as many impressions as a copper-plate would yield, but is also made the means of forming other plates, almost *ad infinitum*, by transfer of the subject thereto in perfect *fac simile*.

This transfer is made by passing a cylindrical piece of softened steel over the hardened plate, with a pressure sufficient to give it a complete impression *in relief*; and this cylinder, being hardened, is then used to transfer the subject to any required number of soft plates, which plates may again be used, by a similar process, in endless reproduction.

To Mr. Perkins we are greatly indebted for his discoveries in this branch of the arts: he may be said to be the father of steel plate printing. In a manufacturing point of view this invention is most highly valuable: the power of multiplying plates, whether on steel or copper, by this ingenious means of transferring designs from hardened surfaces, is unlimited; any number of plates of soft metal may be produced from one engraving by the artist, which may be afterwards hardened. The printers of silks, muslins, calicoes, &c. are thus enabled to expend large sums of money in paying the best artists for designing over a small surface, and executing the same in the best manner of their art. Their design may then be multiplied to the extent required, particularly in covering the whole surface of printing cylinders, which is now very commonly practised.

**A PORTABLE DRY DOCK.**—A gentleman of our city, who was recently at Pittsburgh, has described to us a Portable Dry Dock, which is in advantageous use there, and which should be introduced in every sea port in the United States. It is formed of strong timber, well planked at the sides and bottom, and at one end. At the other end a gate is constructed, such as is sometimes used as a lock gate, which is closed when required, so as to form a firm and perfect barrier against the admission of water. At the planked and fixed end of the Dock is placed a small engine, the cost of which did not exceed three hundred dollars. This is employed to work four pumps, by which the water is taken from the dock with rapidity and ease.

When a vessel is about to be "taken into dock," certain valves of the simplest construction are opened, and the dock is immediately filled with water: assisted by stone ballast,



it sinks to a sufficient depth to admit the vessel; the gates are then opened, and she is floated in. In five hours from the time the preparations to take in a vessel are commenced, she may be admitted into the dock and safely "shoved up," so as to enable the carpenters to work at the bottom with perfect security and comfort, and in an ample space.

The whole cost of this dock did not amount to twelve hundred dollars. It has been in constant and successful use at Pittsburgh for upwards of two years, and no doubt of its competency for all the purposes of repairing the bottoms of vessels, and for all the uses of "Dry Dockage," is there entertained.

This "Dry Dock" has been used on the Ohio for the repairs of steamboats of the largest class, exceeding 600 tons in burden, and, therefore, as large as most of the shipping on the sea-board of the United States.

During the prevalence of the cholera on the Ohio last summer, a large steamboat went to Pittsburgh to repair: that fatal disease was supposed to prevail on board of this boat, and objections to her repairing near Pittsburgh were loudly expressed. She towed the dry dock down the Ohio, and having carried it to a proper place, she went into it, was completely repaired, and then towed it back to Pittsburgh.

The inventor and constructor of this valuable work is Mr. THOMAS CUNNINGHAM, of Pittsburgh, now residing there: he is an ingenious, industrious, and respectable mechanic. If this notice of his work shall promote his fortune, the gentleman who has communicated this statement will be highly gratified.

It is understood that Mr. Cunningham has obtained a patent for his Portable Dry Dock.

*The Marquis of Blandford's Apiary, on Mr. Nutt's System.* [From the London Mechanics' Magazine.]

SIR,—From the interest which you have uniformly taken in whatever relates to the extension of Mr. Nutt's invaluable system of bee management, (see page 174 of Vol. I. of this work,) I am induced to forward to your notice a detail of the successful results of that system, in the hands of the Marquis of Blandford, at Delabere Park, near Reading.

His lordship's park is most delightfully situated, about a mile from the romantic and retired village of Pangebourne, in Berkshire. The choice of the situation for the apiary is most excellent and delightful. It is at the top of a tower, forty-six feet high, situated in the midst of a wood, and commanding a most extensive view of the surrounding country, including a great part of Berkshire, Oxfordshire, Wiltshire, and Hampshire, the face of nature being clad in its endless variety of fertility, and old father Thames gently meandering through the valley formed by the distant hills which close the scene, but affording few prospective traces of those immense physical developments of his powers which render him truly the monarch of rivers. On the top of this tower his lordship possesses four colonies in collateral hives, and one inverted hive, all of which have been started since April. In the collateral hives the labors of the bees have been highly successful. From one colony his lordship has already separated a box containing 30 lbs. of honey, whilst another box, along with three small glasses, which cannot contain together less than 40 lbs.,

are quite ready for taking, and which will afford the sum of 70 lbs., and this without infringing upon the stock necessary for their winter subsistence. Upon my examination, the thermometer in the end boxes did not exceed 70°, whilst exposed to the atmosphere it was at 64°. A most remarkable contrast was afforded by the superior quality of the honey contained in the end box over that in the "pavilion of nature;" this superiority, particularly in the coloring matter, was most evident. Mr. Smith, the intelligent keeper, who quite follows in the steps of Mr. Nutt, informed me that the average quantity of honey produced from a cottage hive, upon the old system of management, did not exceed 30 lbs. to 40 lbs., whilst only in one case did he obtain, from a hive enlarged by eking, the amount of 50 lbs. It is extremely satisfactory and fortunate that, for the sake of reference, Mr. Nutt's system has fallen into such good hands, as both his lordship and the keeper appear to be as devoted to the system as they have been happy in the results.

I am not able to speak much regarding the progress of the inverted hives, of which his lordship has two—the one being at the top of the tower, and the other on the lawn at the back of the house—the former containing twenty-three glasses, and the latter thirty-three: this last is really a magnificent construction, an ornamental garden appendage such as few noblemen can boast. The bees had in each filled all the intermediate parts betwixt the hives and the glasses, and were just commencing their labors in the latter. Next summer his lordship will, I anticipate, reap an extensive harvest, both from these as well as his collateral hives, which are getting into prime and excellent condition for the winter.

I have troubled you with these details, because they relate to facts, and a publication of such facts is all that is required to introduce this admirable system of bee management into universal introduction. Let the example but be extended, and the practice inculcated, amongst our rural population, and, whilst it will greatly conduce to their advantage, we need no longer look to France or Italy for a supply of treasures which our own country and peasantry could so efficiently produce.

I am, sir, your obedient servant,

ABRAHAM BOOTH.

Reading, July 22, 1833.

[In no country is there more facility afforded for the introduction of some such plan as in this, and the great interest many of our readers have expressed on the subject, induces us to insert another article from one of the best periodicals of the present day.—Ed. M. M.]

*Description of an Improved Bee-Hive.* By Mr. WILLIAM TODD, Kirkmaiden. [From the Quarterly Journal of Agriculture.]

Mr. Todd, having, for some years past, made the management of bees a subject of study, has paid particular regard to the various kinds of hives, and the modes adopted for separating the bees from a part of their work, without injury to the remainder of the bees or their combs; and after trying various sorts of hives, has found none that he would compare with the one which is the subject of this paper. It is now four years since this hive was brought to its present

improved state, and the experience of that prolonged trial has served to convince him more and more that it is all that can be desired, for the two purposes of *dividing swarms* and the *abstraction of honey without killing the bees*. Mr. Todd believes that the plan is hitherto confined to himself and two or three others in his neighborhood, but is desirous that its advantages should be made known.

The annexed cuts, figs. 1 and 2, exhibit

Fig. 1.

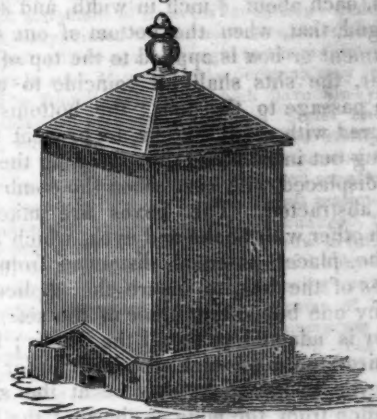
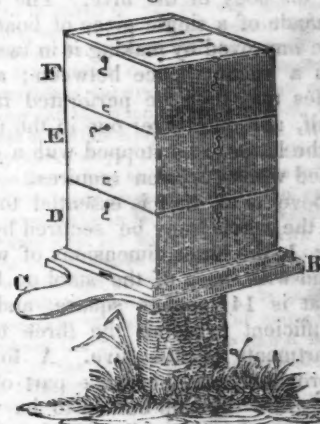


Fig. 2.



this hive, the latter in a state denuded of the external covering, the former with the cover in its place, being the ordinary working state. The pedestal A is a pillar of wood or stone, of any convenient height, and fixed securely in the ground. On the top of the pillar is fixed a piece of stout board, having at each end a perforation or mortice. The stool or basement, B, on which the hive is set, is fastened to the former by means of two staples which pass through the mortices, and secured with two iron or wooden plugs. The stool is a board 14½ inches square, with a landing place, C, in front, which is rounded off on the upper surface to prevent the lodgement of water. Round this board, at the distance of half an inch from its outer edge, is a frame of wood 1½ inches broad, and 1 inch in thickness. This is fixed upon the upper surface of the stool, having in the front side a door of entrance for the bees. This passage may be made 2 inches in width by ½ inch in height on the outside, but widening inward to 3 inches by ½ inch in height. The side of the frame opposite to the entrance is attached to a slip bottom of ½ inch in thickness, fitted to slide out like a drawer, thereby affording the means of cleaning out the bottom of the hive, and on which a supply of food can be placed when necessary. The inside measure of this



frame should correspond to the inside dimensions of the boxes.

The body of the hive is made of deal, about one inch in thickness. Its dimensions are 10½ inches square inside measure, and the total height about 19½ inches, but divided into three stories or compartments, D, E, F, each 6½ inches high, and separable from each other as occasion may require. Each box is furnished with a top and bottom perforated with oblong slits, as seen in the top of fig. 2; these are of hard-wood, ¼ inch thick, and each formed of two pieces. Each half of the tops and bottoms have three slits, each about ½ inch in width, and so arranged, that, when the bottom of one compartment or box is applied to the top of any other, the slits shall all coincide to allow free passage to the bees; the bottoms are secured with small buttons, to prevent their falling out in handling, but allowing them to be displaced with ease when the comb is to be abstracted. The boxes are united to each other with hooks and eyes, which must all be placed at equal distances from the edges of the box, to insure the application of any one box to any other of the set. One cover is adapted to fit all the boxes; it is required to be of thick wood, in order that the eyes of the hooks may be at the same distance from the edge as those of the boxes, its length and breadth being exactly the same as the body of the hive. The cover may be made of a single piece of board, or it may be improved by making it in two layers, with a vacant space between; a few small holes may then be perforated in the lower half, and one larger one in the upper portion, the latter to be stopped with a cork, and opened when occasion requires.

The above is all that is essential to this hive, but the whole may be secured by the cover, fig. 1, the outer dimensions of which correspond with those of the stool or basement, that is 14½ inches square, and the height sufficient to admit the three boxes or compartments of the hive. A folding flap is provided on the back part of the cover, to allow the slip bottom to be withdrawn and replaced, while in the front, as seen in the figure, a small part is cut away to leave the entrance clear.

In the management of this hive, when a swarm takes place, if the swarm is large, take three boxes, but if small, two will suffice. Should three boxes have been applied, the lower one ought to be removed about the middle or end of September, as there should never be more than two boxes allowed for a hive during winter, nor till the bees have thrown the first swarm; when a first swarm is thrown, add a third box, to prevent after-casts. If it is wished that the hive should not swarm at all, let a third box be added about the 1st of June, when the hive begins to appear crowded, and afterwards a fourth box, if it appear necessary.

To divide swarms, watch the time when the hives become crowded, and when drones begin to appear in the bee garden. Place a stool or basement, with an empty box on it, on each side of the hive you mean to divide, and have at hand a spare cover. Unhook the hive, and draw through between the boxes a piece of thin wire or a thin table knife, to separate any portions of wax that may adhere. In the evening, when the bees are mostly home, move the boxes gently, and insert between them two large sheets of tin plate; lift the upper box with one of

the tin sheets, and place it over the box already provided on one of the stools; close the entrance of this stool, and take out the tin plate; put the cover on the other portion of the hive, and remove it to the empty box on the other stool, and when all are properly secured, allow this division to remain open, that the stray bees may settle in it. Let it remain open during the following day, and at night shut it up, using precaution to admit the necessary air, and open the other division. Let the second be shut up, and the first open for twenty-four hours; and if the weather have been fine, you may set both at liberty; but if the weather have been unfavorable for bees going abroad, they must be kept apart a day longer. After this they will continue to work as separate swarms.

The person chiefly employed in shifting the boxes may be protected from the bees by a broad hat with a veil tied round the hat, and round the shoulders, made of calico, with a piece of gauze or cat-gut in front, and on the hands a pair of gloves, and over these a pair of woollen mittens, the clothes well buttoned up and secured.

Should the hive at killing time consist of three boxes, and the lower one be considered but partially filled, and should it, together with the middle one, be sufficient for the support of the hive, the upper box may then be taken away. To do this, disengage the upper box as before directed, and insert the sheets of tin plate; take away the upper box and lay it on a stool at 30 or 40 yards distance. Put the cover on the remaining boxes, and allow the bees free passage in both divisions. The bees in the removed box may be left alone for a little, and all that rise will fly back to the old stool, where, finding the hive as usual, they will remain. The bees in the separated box soon get tame when parted from the body of the hive, and may be blown out with bellows, or thrust out with a quill, and when once they take wing, they will go back to the old stool. Care should be taken at this season of the year to observe if the queen bee be in the separated box, that she may be preserved and put back safely to the hive.

When it is found necessary to feed bees, a trough of tinned iron, 10½ inches long, 4 inches wide, and 1 inch nearly in depth, with a floating lid of nearly the same dimensions, made of very thin fir wood, and bored like a sieve. This is filled with diluted honey, or thin syrup of sugar; and having put the floater upon it, draw out the slip behind, and put in the feeder, which must be so near the size of the opening as not to let a bee pass when it is in, and at the same time allow it to go in freely. The hive is then shut up to prevent other bees from having admission.

When weak swarms are fed in the ordinary way, without shutting them up, the bees of neighboring hives are attracted, who not only carry off the food given, but, after it is done, continue to rob the weak hive of all their store, if they have any. Feeding in this way often does harm rather than good.

In feeding, it is advisable to give the bees daily as much as the feeder will contain for a succession of days, if they continue to take it up, until they have got what may be considered proper or sufficient. During this time they are closely shut up, and after feeding is dropped, let them be kept in till they settle, and till the neighboring swarms, if they be in motion, settle also, when the pas-

sage may be left open. This prevents them from being the prey of neighboring swarms.

[From the New-York Farmer.]

**EGGS OF THE SILK WORM.**—On opening a cocoon and carefully taking off the shell of the chrysalis, the miller or perfect insect is exhibited entire. The insides of the miller appear to be composed wholly of eggs, without the least appearance of any other parts or members. It requires leisure and patience to ascertain the number of eggs in a single insect—a little more than we possess. Assigning the undertaking, therefore, to one of the fair sex, who sometimes, to say the least, possess the above requisites, we found the number to be about three hundred. Multiplying this number by 100, the product is 30,000 eggs, which will produce nearly as many worms. What ample and beautiful provision Providence has made to render this insect useful to man! If each one only laid a very few eggs, nearly the whole brood would be required to propagate the race, leaving so few cocoons that could be reeled, that none but queens and princesses could afford to wear the "royal purple."

**IMPROVED LIVE STOCK.**—The Hon. Henry Clay, while at his recent visit to Albany, offered for a bull and a heifer calf, six months old, belonging to Gen. S. Van Rensselaer, jr. four hundred dollars, which were refused.

They were from the famous stock of short horn Durham cattle, imported by Gen. S. Van Rensselaer in 1823, from the herd of Mr. Champion, England.

We are also informed that Mr. Bement, of Albany, is about importing some of the late improved breed of Durham cattle, as well as some of the much esteemed Southdown sheep.

Mr. Hawes, an English gentleman, lately settled near Albany, brought out with him last fall some of the Berkshire breed of hogs, which were very much admired at the fair, and the demand for the pigs was so great that he could not supply one half the demand.

We have two most beautiful pigs, or rather hogs, of this breed, three months old, obtained from Mr. Brientnall, of Goshen, N. Y. We have not had the pleasure of seeing Mr. Hawes' pigs, but if they are superior to ours, there is no wonder that the demand exceeds the supply.

**VALUABLE HEIFER CALF.**—The famous white cow, Dulcibella, an imported full bred improved Durham Short Horn, exhibited by Mr. C. N. Bement, at the late cattle show and fair, held at the city of Albany, has since produced a heifer calf, for which, we are informed, he refused fifty dollars before she was twenty-four hours old.

**CUTTING OFF POTATO BLOSSOMS.**—We have inserted notices of the increased products from this practice. A writer in the New-England Farmer made an experiment, which resulted in obtaining a less quantity from the row deprived of the blossoms.

**EXHIBITION OF DAHLIAS.**—A gentleman who has returned in one of the late packets from England, was at an exhibition of dahlias at Cambridge, in September, shown by the Horticultural Society, and was told that upwards of one thousand varieties of dahlias were exhibited.



[From the Washington Globe—Extra.]

## MESSAGE

*Of the President of the United States to  
both Houses of Congress.*

FELLOW-CITIZENS OF THE SENATE,  
AND HOUSE OF REPRESENTATIVES:

On your assembling to perform the high trusts which the people of the United States have confided to you, of legislating for their common welfare, it gives me pleasure to congratulate you upon the happy condition of our beloved country. By the favor of Divine Providence, health is again restored to us; peace reigns within our borders; abundance crowns the labors of our fields; commerce and domestic industry flourish and increase; and individual happiness rewards the private virtue and enterprise of our citizens.

Our condition abroad is no less honorable than it is prosperous at home. Seeking nothing that is not right, and determined to submit to nothing that is wrong, but desiring honest friendships and liberal intercourse with all nations, the United States have gained throughout the world the confidence and respect which are due to a policy so just and so congenial to the character of the American people and to the spirit of their institutions.

In bringing to your notice the particular state of our Foreign Affairs, it affords me high gratification to inform you, that they are in a condition which promises the continuance of friendship with all nations.

With Great Britain the interesting question of our Northeastern Boundary remains still undecided. A negotiation, however, upon that subject, has been renewed since the close of the last Congress; and a proposition has been submitted to the British Government with the view of establishing, in conformity with the resolution of the Senate, the line designated by the Treaty of 1783. Though no definitive answer has been received, it may be daily looked for, and I entertain a hope that the overture may ultimately lead to a satisfactory adjustment of this important matter.

I have the satisfaction to inform you that a negotiation, which, by desire of the House of Representatives, was opened some years ago with the British Government, for the erection of light-houses on the Bahamas, has been successful. Those works, when completed, together with those which the United States have constructed on the western side of the Gulf of Florida, will contribute essentially to the safety of navigation in that sea. This joint participation in establishments interesting to humanity and beneficial to commerce, is worthy of two enlightened nations; and indicates feelings which cannot fail to have a happy influence upon their political relations. It is gratifying to the friends of both to perceive that the intercourse between the two people is becoming daily more extensive, and that sentiments of mutual good will have grown up, benefitting their common origin and justifying the hope, that by wise counsels on each side, not only unsettled questions may be satisfactorily terminated, but new causes of misunderstanding prevented.

Notwithstanding that I continue to receive the most amicable assurances from the Government of France, and that in all other respects the most friendly relations exist between the United States and that Government, it is to be regretted that the stipulations of the Convention concluded on the 4th July, 1831, remain in some important parts unfulfilled.

By the second article of that Convention it was stipulated that the sum payable to the United States should be paid at Paris in six annual instalments, into the hands of such person or persons as should be authorized by the Government of the United States to receive it; and by the same article the first instalment was payable on the 2d day of February, 1833. By the act of Congress of the 13th July, 1832, it was made the duty of the Secretary of the Treas-

ury to cause the several instalments, with the interest thereon, to be received from the French Government, and transferred to the U. States in such manner as he may deem best; and by the same act of Congress, the stipulations on the part of the U. States, in the Convention, were in all respects fulfilled. Not doubting that a treaty thus made and ratified by the two Governments, and faithfully executed by the U. States, would be promptly complied with by the other party, and desiring to avoid the risk and expense of intermediate agencies, the Secretary of the Treasury deemed it advisable to receive and transfer the first instalment by means of a draft upon the French Minister of Finance. A draft for this purpose was accordingly drawn in favor of the Cashier of the Bank of the United States, for the amount accruing to the United States out of the first instalment, and the interest payable with it. This bill was not drawn at Washington until five days after the instalment was payable at Paris, and was accompanied by a special authority from the President, authorizing the Cashier or his assigns to receive the amount. The mode thus adopted of receiving the instalment was officially made known to the French Government, by the American Charge d'Affaires at Paris, pursuant to instructions from the Department of State. The bill, however, though not presented for payment until the 23d day of March, was not paid, and for the reason assigned, by the French Minister of Finance, that no appropriation had been made by the French Chambers. It is not known to me that up to that period any appropriation had been required of the Chambers; and, although a communication was subsequently made to the Chambers, by direction of the King, recommending that the necessary provision should be made for carrying the convention into effect, it was at an advanced period of the session, and the subject was finally postponed until the next meeting of the Chambers.

Notwithstanding it has been supposed by the French Ministry, that the financial stipulations of the treaty cannot be carried into effect without an appropriation by the Chambers, it appears to me to be not only consistent with the charter of France, but due to the character of both Governments, as well as to the rights of our citizens, to treat with the convention made and ratified in proper form, as pledging the good faith of the French Government for its execution, and as imposing upon each Department an obligation to fulfil it; and I have received assurances through our Charge d'Affaires at Paris and the French Minister Plenipotentiary at Washington, and more recently through the Minister of the United States at Paris, that the delay has not proceeded from any indisposition on the part of the King and his Ministers to fulfil the treaty, and that measures will be presented at the next meeting of the Chambers, and with a reasonable hope of success, to obtain the necessary appropriation.

It is necessary to state, however, that the documents, except certain lists of vessels captured, condemned, or burned at sea, proper to facilitate the examination and liquidation of the reclamations comprised in the stipulation of the Convention, and which by the 6th article France engaged to communicate to the United States by the intermediary of the legation, though repeatedly applied for by the American Charge d'Affaires, under instructions from this Government, have not yet been communicated; and this delay, it is apprehended, will necessarily prevent the completion of the duties assigned to the Commissioners within the time at present prescribed by law.

The reasons for delaying to communicate these documents have not been explicitly stated, and this is the more to be regretted, as it is not understood that the interposition of the Chambers is in any manner required for the delivery of those papers.

Under these circumstances, in a case so important to the interests of our citizens, and to the character of our country, and under disappointments so unexpected, I deemed it my duty, however I might respect the general assurances to which I have adverted, no longer to delay the appointment of a Minister Plenipotentiary to Paris, but to despatch

him in season to communicate the result of his application to the French Government at an early period of your session. I accordingly appointed a distinguished citizen for this purpose, who proceeded on his mission in August last, and was presented to the King early in the month of October, since which time no despatches have been received from him. He is particularly instructed as to all matters connected with the present posture of affairs, and I indulge the hope, that with the representations he is instructed to make, and from the dispositions manifested by the King and his Ministers in their recent assurances to our Minister at Paris, the subject will be early considered and satisfactorily disposed of at the next meeting of the Chambers.

As this subject involves important interests, and has attracted a considerable share of the public attention, I have deemed it proper to make this explicit statement of its actual condition; and should I be disappointed in the hope now entertained, the subject will be again brought to the notice of Congress in such manner as the occasion may require.

The friendly relations which have always been maintained between the United States and Russia, have been further extended and strengthened by the treaty of navigation and commerce concluded on the 6th of December last, and sanctioned by the Senate before the close of its last session. The ratifications having been since exchanged, the liberal provisions of the Treaty are now in full force; and, under the encouragement which they have received, a flourishing and increasing commerce, yielding its benefits to the enterprise of both nations, affords to each the just recompense of wise measures, and adds new motives for that mutual friendship which the two countries have hitherto cherished towards each other.

It affords me peculiar satisfaction to state that the Government of Spain has at length yielded to the justice of the claims which have been so long urged in behalf of our citizens, and has expressed a willingness to provide an indemnification, as soon as the proper amount can be agreed upon. Upon this latter point, it is probable an understanding had taken place between the Minister of the United States and the Spanish Government, before the decease of the late King of Spain, and, unless that event may have delayed its completion, there is reason to hope that it may be in my power to announce to you early in your present session, the conclusion of a convention upon terms not less favorable than those entered into for similar objects with other nations. That act of justice would well accord with the character of Spain, and is due to the United States from their ancient friend. It could not fail to strengthen the sentiments of amity and good will between the two nations which it is so much the wish of the United States to cherish, and so truly the interest of both to maintain.

By the first section of an act of Congress passed on the 13th of July, 1832, the tonnage duty on Spanish ships arriving from the ports of Spain was limited to the duty payable on American vessels in the ports of Spain previous to 30th October, 1817, being five cents per ton. That act was intended to give effect, on our side, to an arrangement made with the Spanish Government, by which discriminating duties of tonnage were to be abolished in the ports of the United States and Spain on the vessels of the two nations. Pursuant to that arrangement, which was carried into effect on the part of Spain on the 20th of May, 1832, by a royal order, dated the 29th April, 1832, American vessels in the ports of Spain have paid 5 cents per ton, which rate of duty is also paid in those ports by Spanish ships; but, as American vessels pay no tonnage duty in the ports of the United States, the duty of five cents payable in our ports by Spanish vessels under the act above mentioned is really a discriminating duty operating to the disadvantage of Spain. Though no complaint has yet been made on the part of Spain, we are not the less bound by the obligations of good faith to remove the discrimination; and I recommend that the act be amended accordingly. As the royal order above alluded to includes the ports of the Balearic and Canary Islands, as well as those of Spain, it would seem that the provisions of the act of Congress should be equally extensive; and that for the repayment of such duties as may have been improperly received, an addition should be made to the sum appropriated at the last session of Congress for refunding discriminating duties.

As the arrangement referred to, however, did not embrace the Islands of Cuba and Porto Rico, discriminating duties, to the prejudice of American shipping, continue to be levied there. From the extent



of the commerce carried on between the United States and those islands, particularly the former, this discrimination causes serious injury to one of those great national interests which it has been considered an essential part of our policy to cherish, and has given rise to complaints on the part of our merchants. Under instructions given to our Minister at Madrid, earnest representations have been made by the Spanish Government upon this subject, and there is reason to expect, from the friendly disposition which is entertained towards this country, that a beneficial change will be produced. The disadvantage, however, to which our shipping is subjected by the operation of these discriminating duties, requires that they be met by suitable countervailing duties during your present session; power being at the same time vested in the President to modify or discontinue them as the discriminating duties on American vessels or their cargoes may be modified or discontinued at these islands. Intimations have been given to the Spanish Government, that the United States may be obliged to resort to such measures as are of necessary self defence; and there is no reason to apprehend that it would be unfavorably received. The proposed proceeding, if adopted, would not be permitted, however, in any degree to introduce a relaxation in the efforts of our Minister to effect a repeal of this irregularity by friendly negotiation, and it might serve to give force to his representations by showing the dangers to which that valuable trade is exposed, by the obstructions and burthens which a system of discriminating and countervailing duties necessarily produces.

The selection and preparation of the Florida archives for the purpose of being delivered over to the United States, in conformity with the royal order, as mentioned in my last annual message, though in progress, has not yet been completed. This delay has been produced, partly by causes which were unavoidable, particularly the prevalence of the cholera at Havana; but measures have been taken which it is believed will expedite the delivery of those important records.

Congress were informed at the opening of the last session, that, "owing, as was alleged, to embarrassments in the finances of Portugal, consequent upon the civil war in which that nation was engaged," payment had been made of only one instalment of the amount which the Portuguese Government had stipulated to pay for indemnifying our citizens for property illegally captured in the blockade of Terceira.

Since that time a postponement for two years, with interest, of the two remaining instalments, was requested by the Portuguese Government; and as a consideration, it offered to stipulate that rice of the United States should be admitted into Portugal at the same duties as Brazilian rice. Being satisfied that no better arrangement could be made, my consent was given, and a royal order of the King of Portugal was accordingly issued on the 4th of February last, for the reduction of the duty on rice of the United States. It would give me great pleasure, if, in speaking of that country, in whose prosperity the United States are so much interested, and with whom a long subsisting, extensive, and mutually advantageous commercial intercourse has strengthened the relations of friendship, I could announce to you the restoration of its internal tranquillity.

Subsequently to the commencement of the last session of Congress, the final instalment payable by Denmark under the convention of the 28th day of March, 1830, was received. The commissioners for examining the claims have since terminated their labors, and their awards have been paid at the Treasury as they have been called for. The justice rendered to our citizens by that government is thus completed, and a pledge is thereby afforded for the maintenance of that friendly intercourse becoming the relations that the two nations mutually bear to each other.

It is satisfactory to inform you that the Danish government have recently issued an ordinance by which the commerce with the Island of St. Croix is placed on a more liberal footing than heretofore. This change cannot fail to prove beneficial to the trade between the United States and that colony, and the advantages likely to flow from it may lead to greater relaxations in the colonial systems of other nations.

The ratifications of the Convention with the King of the Two Sicilies have been duly exchanged, and the Commissioners appointed for examining the claims under it, have entered upon the duties assigned to them by law. The friendship that the interests of the two nations require of them being now established, it may be hoped that each will enjoy the benefits which a liberal commerce should yield to both.

A Treaty of Amity and Commerce between the United States and Belgium was concluded during the last winter, and received the sanction of the Senate; but the exchange of the ratifications has been hitherto delayed, in consequence, in the first instance, of some delay in the reception of the Treaty at Brussels, and, subsequently, of the absence of the Belgian Minister of Foreign Affairs at the important conferences in which his Government is engaged at London.

That treaty does but embody those enlarged principles of friendly policy, which, it is sincerely hoped, will always regulate the conduct of the two nations, having such strong motives to maintain amicable relations towards each other, and so sincerely desirous to cherish them.

With all the other European powers with whom the United States have formed diplomatic relations, and with the Sublime Porte, the best understanding prevails. From all, I continue to receive assurances of good will towards the United States, assurances which it gives me no less pleasure to reciprocate than to receive. With all, the engagements which have been entered into are fulfilled with good faith on both sides. Measures have also been taken to enlarge our friendly relations and extend our commercial intercourse with other States. The system we have pursued of aiming at no exclusive advantages, of dealing with all on terms of fair and equal reciprocity, and of adhering scrupulously to all our engagements, is well calculated to give success to efforts intended to be mutually beneficial.

The wars of which the southern part of this continent was, so long, the theatre, and which were carried on, either by the mother country against the States which had formerly been her colonies, or by the States against each other, having terminated, and their civil dissensions having so far subsided, as, with few exceptions, no longer to disturb the public tranquillity, it is earnestly hoped those States will be able to employ themselves without interruption in perfecting their institutions, cultivating the arts of peace, and promoting, by wise councils and able exertions, the public and private prosperity which their patriotic struggles so well entitle them to enjoy.

With those States our relations have undergone but little change during the present year. No reunion having yet taken place between the States which composed the republic of Colombia, our Chargé d'Affaires at Bogota has been accredited to the Government of New Grenada, and we have therefore no diplomatic relations with Venezuela and Ecuador, except as they may be included in those heretofore formed with the Colombian Republic. It is understood that representatives from the three States were about to assemble at Bogota to confer on the subject of their mutual interests, particularly that of their union; and if the result should render it necessary, measures will be taken on our part to preserve with each that friendship and those liberal commercial connections which it has been the constant desire of the United States to cultivate with their sister Republics in this hemisphere. Until the important question of re-union shall be settled, however, the different matters which have been under discussion between the United States and the Republic of Colombia or either of the States which composed it, are not likely to be brought to a satisfactory issue.

In consequence of the illness of the Chargé d'Affaires appointed to Central America at the last session of Congress, he was prevented from proceeding on his mission until the month of October. It is hoped, however, that he is by this time at his post, and that the official intercourse, unfortunately so long interrupted, has been thus renewed on the part of the two nations so amicably and advantageously connected by engagements founded on the most enlarged principles of commercial reciprocity.

It is gratifying to state, that, since my last annual message, some of the most important claims of our fellow-citizens upon the Government of Brazil have been satisfactorily adjusted, and a reliance is placed on the friendly dispositions manifested by it, that justice will also be done in others. No new cases of complaint have arisen: and the trade between the two countries flourishes under the encouragement secured to it by the liberal provisions of the treaty.

It is cause of regret, that, owing probably to the civil dissensions which have occupied the attention of the Mexican Government, the time fixed by the treaty of limits with the United States for the meeting of the Commissioners to define the boundaries between the two nations, has been suffered to expire without the appointment of any Commissioners on the part of that Government. While the true boundary remains in doubt by either party, it is difficult to give effect to those measures which are necessary to the protection and quiet of our numerous citizens

residing near that frontier. The subject is one of great solicitude to the United States, and will not fail to receive my earnest attention.

The treaty concluded with Chili and approved by the Senate at its last session, was also ratified by the Chilean Government, but with certain additional and explanatory articles of a nature to have required it to be again submitted to the Senate. The time limited for the exchange of the ratifications, however, having since expired, the action of both Governments on the treaty will again become necessary.

The negotiations commenced with the Argentine Republic relative to the outrages committed on our vessels engaged in the fisheries at the Falkland Islands by persons acting under the color of its authority, as well as the other matters in controversy between the two Governments have been suspended by the departure of the Chargé d'Affaires of the U.S. from Buenos Ayres. It is understood, however, that a minister was subsequently appointed by that Government to renew the negotiation in the United States, but though daily expected, he has not yet arrived in this country.

With Peru no treaty has yet been formed, and with Bolivia no diplomatic intercourse has yet been established. It will be my endeavor to encourage those sentiments of amity and that liberal commerce which belong to the relations in which the independent States of this continent stand towards each other.

I deem it proper to recommend to your notice the revision of our consular system. This has become an important branch of the public service, inasmuch as it is intimately connected with the preservation of our national character abroad, with the interest of our citizens in foreign countries, with the regulation and care of our commerce, and with the protection of our seamen. At the close of the last session of Congress I communicated a report from the Secretary of State upon the subject, to which I now refer, as containing information which may be useful in any inquiries that Congress may see fit to institute with a view to a salutary reform of the system.

It gives me great pleasure to congratulate you upon the prosperous condition of the finances of the country, as will appear from the report which the Secretary of the Treasury will in due time lay before you. The receipts into the Treasury during the present year will be more than thirty-two millions of dollars. The revenue derived from customs will, it is believed, be more than twenty-eight millions, and the public lands will yield about three millions. The expenditures within the year for all objects, including \$2,572,240 99 on account of the public debt, will not amount to twenty-five millions; and a large balance will remain in the Treasury after satisfying all the appropriations chargeable on the revenue for the present year.

The measures taken by the Secretary of the Treasury will probably enable him to pay off in the course of the present year the residue of the exchanged four and a half per cent. stock, redeemable on the first of January next. It has therefore been included in the estimated expenditure of this year, and forms a part of the sum above stated to have been paid on account of the public debt. The payment of this stock will reduce the whole debt of the United States, funded and unfunded, to the sum of £4,760,982 08. And as provision has already been made for the four and a half per cents. above mentioned, and charged in the expenses of the present year, the sum last stated is all that now remains of the national debt; and the revenue of the coming year, together with the balance now in the Treasury, will be sufficient to discharge it, after meeting the current expenses of the Government. Under the power given to the Commissioners of the Sinking Fund, it will, I have no doubt, be purchased on favorable terms within the year.

From this view of the state of the finances and the public engagements yet to be fulfilled, you will perceive that, if Providence permits me to meet you at another session, I shall have the high gratification of announcing to you that the national debt is extinguished. I cannot refrain from expressing the pleasure I feel at the near approach of that desirable event.—The short period of time within which the public debt will have been discharged is strong evidence of the abundant resources of the country, and of the prudence and economy wise which the Government has heretofore been administered. We have waged two wars, since we became a nation, with one of the most powerful kindoms in the world,—both of them undertaken in defence of our dearest rights—both successfully prosecuted and honorably terminated—and many of those who partook in the first struggle, as well as the second—will have lived to see the last item of the debt incurred in those necessary, but expensive conflicts, faithfully and honestly discharged, and we shall have the proud satisfaction of bequeath-



ing to the public servants who follow us in the administration of the Government, the rare blessing of a revenue sufficiently abundant, raised without injustice or oppression to our fellow citizens, and unincumbered with any burthens but what they themselves shall think proper to impose upon it.

The flourishing state of the finances ought not, however, to encourage us to indulge in a lavish expenditure of the public treasure. The receipts of the present year, do not furnish the test by which we are to estimate the income of the next. The changes made in our revenue system by the acts of Congress of 1832 and 1833, and more especially by the former, have swelled the receipts of the present year, far beyond the amount to be expected in future years upon the reduced tariff of duties. The shortened credits on revenue bonds, and the cash duties on woollens, which were introduced by the act of 1832, and took effect on the fourth of March last, have brought large sums into the Treasury in 1833, which, according to the credits formerly given, would not have been payable until 1834, and would have formed a part of the income of that year. These causes would of themselves produce a great diminution of the receipts in the year 1834, as compared with the present one; and they will be still more diminished by the reduced rates of duties which take place on the first of January next, on some of the most productive articles. Upon the best estimate that can be made, the receipts of the next year, with the aid of the unappropriated amount now in the Treasury, will not be much more than sufficient to meet the expenses of the year, and pay the small remnant of the national debt which yet remains unsatisfied. I cannot therefore, recommend to you any alteration in the present tariff of duties. The rate as now fixed by law on the various articles, was adopted at the last session of Congress, as a matter of compromise, with unusual unanimity, and unless it is found to produce more than the necessities of the Government call for, there would seem to be no reason at this time to justify a change.

But while I forbear to recommend any further reduction of the duties, beyond that already provided for by the existing laws, I must earnestly and respectfully press upon Congress the importance of abstaining from all appropriations which are not absolutely required for the public interest, and authorized by the powers clearly delegated to the United States. We are beginning a new era in our Government. The national debt, which has so long been a burthen on the Treasury, will be finally discharged in the course of the ensuing year. No more money will afterwards be needed than what may be necessary to meet the ordinary expenses of the Government. Now, then, is the proper moment to fix our system of expenditure on firm and durable principles: and I cannot too strongly urge the necessity of a rigid economy, and an inflexible determination not to enlarge the income beyond the real necessities of the Government, and not to increase the wants of the Government by unnecessary and profuse expenditures. If a contrary course should be pursued, it may happen that the revenue of 1834 will fall short of the demands upon it; and after reducing the tariff in order to lighten the burdens of the people, and providing for a still further reduction to take effect hereafter, it would be much to be deplored if, at the end of another year, we should find ourselves obliged to retrace our steps and impose additional taxes to meet unnecessary expenditures.

It is my duty on this occasion to call your attention to the destruction of the public building occupied by the Treasury Department, which happened since the last adjournment of Congress. A thorough inquiry into the causes of this loss was directed and made at the time, the result of which will be duly communicated to you. I take pleasure, however, in stating here, that by the laudable exertions of the officers of the Department and many of the citizens of the District, but few papers were lost and none that will materially affect the public interest.

The public convenience requires that another building should be erected as soon as practicable, and in providing for it, it will be advisable to enlarge in some manner the accommodations for the public officers of the several Departments, and to authorize the erection of suitable depositories for the safe keeping of the public documents and records.

Since the last adjournment of Congress, the Secretary of the Treasury has directed the money of the United States to be deposited in certain State Banks designated by him, and he will immediately lay before you his reasons for this direction. I concur with him entirely in the view he has taken of the subject, and some months before the removal, I urged upon the Department the propriety of taking that step. The near approach of the day on which

the charter will expire, as well as the conduct of the Bank, appeared to me to call for this measure, upon the high considerations of public interest and public duty. The extent of its misconduct, however, although known to be great, was not at that time fully developed by proof. It was not until late in the month of August that I received from the Government Directors an official report, establishing beyond question, that this great and powerful institution had been actively engaged in attempting to influence the elections of the public officers by means of its money; and that in violation of the express provisions of its charter, it had, by a formal resolution, placed its funds at the disposition of its President, to be employed in sustaining the political power of the Bank. A copy of this resolution is contained in the report of the Government Directors before referred to; and however the same may be disguised by cautious language, no one can doubt that this money was, in truth, intended for electioneering purposes, and the particular uses to which it is proved to have been applied, abundantly show that it was so understood. Not only was the evidence complete as to the past application of the money and power of the Bank to electioneering purposes, but that the resolution of the Board of Directors authorized the same course to be pursued in future.

It being thus established by unquestionable proof, that the Bank of the United States was converted into a permanent electioneering engine, it appeared to me that the path of duty which the Executive Department of the Government ought to pursue, was not doubtful. As by the terms of the Bank charter, no officer but the Secretary of the Treasury could remove the deposits, it seemed to me that this authority ought to be at once exerted to deprive that great corporation of the support and countenance of the Government in such an use of its funds, and such an exertion of its power. In this point of the case the question is distinctly presented, whether the people of the United States are to govern, through representatives chosen by their unbiased suffrages, or whether the power and money of a great corporation, are to be secretly exerted to influence their judgment, and control their decisions. It must now be determined whether the Bank is to have its candidates for all offices in the country, from the highest to the lowest, or whether candidates on both sides of political questions shall be brought forward is heretofore, and supported by the usual means.

At this time the efforts of the Bank to control public opinion, through the distresses of some, and the fears of others, are equally apparent, and if possible more objectionable. By a curtailment of its accommodations more rapid than any emergency requires, and even while it retains specie to an almost unprecedented amount in its vaults, it is attempting to produce great embarrassment in one portion of the community, while through presses known to have been sustained by its money, it attempts by unfounded alarms to create a panic in all.

These are the means by which it seems to expect that it can force a restoration of the deposits, and as a necessary consequence extort from Congress a renewal of its charter. I am happy to know that, through the good sense of our people, the effort to get up a panic has hitherto failed, and that, through the increased accommodations which the State Banks have been enabled to afford, no public distress has followed the exertions of the Bank, and it cannot be doubted that the exercise of its power and the expenditure of its money, as well as its efforts to spread groundless alarm, will be met and rebuked as they deserve.

In my own sphere of duty, I should feel myself called on by the facts disclosed, to order a *scire facias* against the Bank, with a view to put an end to the chartered rights it has so palpably violated, were it not that the charter itself will expire as soon as a decision would probably be obtained from the court of last resort.

I called the attention of Congress to this subject in my last annual message, and informed them that such measures as were within the reach of the Secretary of the Treasury, had been taken to enable him to judge, whether the public deposits in the Bank of the United States were certainly safe, but that as his single powers might be inadequate to the object, I recommended the subject to Congress as worthy of their serious investigation, declaring it as my opinion, that an inquiry into the transactions of that institution, embracing the branches as well as the principal Bank, was called for by the credit which was given throughout the country to many serious charges impeaching their character, and which, if true, might justly excite the apprehension that they were no longer a safe depository of the public money. The ex-

ent to which the examination thus recommended, was gone into, is spread out upon your journals, and is too well known to be stated. Such as was made resulted in a report from a majority of the committee of ways and means, touching certain specified points only, concluding with a resolution, that the Government deposits might safely be continued in the Bank of the United States. This resolution was adopted at the close of the session by the vote of a majority of the house of Representatives.

Although I may not always be able to concur in the views of the public interest or the duties of its agents which may be taken by the other departments of the Government or either of their branches, I am, notwithstanding wholly incapable of receiving otherwise than with the most sincere respect, all opinions or suggestions proceeding from such a source, and in respect to none am I more inclined to do so than to the House of Representatives. But it will be seen from the brief views at this time taken of the subject by myself, as well as the more ample ones presented by the Secretary of the Treasury, that the change in the deposits which has been ordered, has been deemed to be called for by considerations which are not affected by the proceedings referred to, and which if correctly viewed by that Department rendered its act a matter of imperious duty.

Coming as you do for the most part, immediately from the people and the States, by election, and possessing the fullest opportunity to know their sentiments, the present Congress will be sincerely solicitous to carry into full and fair effect the will of their constituents in regard to this institution. It will be for those in whose behalf we all act, to decide whether the Executive Department of the Government, in the steps which it has taken on this subject, has been found in the line of its duty.

The accompanying report of the Secretary of War, with the documents annexed to it, exhibit the operations of the War department for the past year, and the condition of the various subjects entrusted to its administration.

It will be seen from them that the Army maintains the character it has heretofore acquired for efficiency and military knowledge. Nothing has occurred since your last session to require its services beyond the ordinary routine of duties, which upon the seaboard and the inland frontier devolve upon it in a time of peace. The system, so wisely adopted and so long pursued, of constructing fortifications at exposed points, and of preparing and collecting the supplies necessary for the military defence of the country, and thus providently furnishing in peace the means of defence in war, has been continued with the usual results. I recommend to your consideration the various subjects suggested in the report of the Secretary of War. Their adoption would promote the public service and meliorate the condition of the Army.

Our relations with the various Indian tribes have been undisturbed since the termination of the difficulties growing out of the hostile aggressions of the Sacs and Fox Indians. Several treaties have been formed for the relinquishment of territory to the United States, and for the migration of the occupants to the region assigned for their residence west of the Mississippi. Should these treaties be ratified by the Senate, provision will have been made for the removal of almost all the tribes remaining east of that river, and for the termination of many difficult and embarrassing questions arising out of their anomalous political condition. It is to be hoped that those portions of two of the southern tribes, which in that event will present the only remaining difficulties, will realize the necessity of emigration, and will speedily resort to it. My original convictions upon this subject have been confirmed by the course of events for several years, and experience is every day adding to their strength. That those tribes cannot exist, surrounded by our settlements, and in continual contact with our citizens, is certain. They have neither the intelligence, the industry, the moral habits, nor the desire of improvement which are essential to any favorable change in their condition. Established in the midst of another and a superior race, and without appreciating the causes of their inferiority, or seeking to control them, they must necessarily yield to the force of circumstances and ere long disappear. Such has been their fate heretofore, and if it is to be averted, and it is, it can only be done by a general removal beyond our boundary, and by the reorganization of their political system upon principles adapted to the new relations in which they will be placed. The experiment which has been recently made has so far proved successful. The emigrants generally are represented to be prosperous and contented, the country suitable to their wants and habits, and the essential articles of subsistence easily procured. When



the report of the Commissioners now engaged in investigating the condition and prospects of these Indians, and in devising a plan for their intercourse and government is received, I trust ample means of information will be in possession of the Government for adjusting all the unsettled questions connected with this interesting subject.

The operations of the Navy during the year, and its present condition, are fully exhibited in the annual report from the Navy Department.

Suggestions are made by the Secretary, of various improvements which deserve careful consideration, and most of which, if adopted, bid fair to promote the efficiency of this important branch of the public service. Among these are the new organization of the Navy Board, the revision of the pay to officers, and a change in the period of time, or in the manner of making the annual appropriations, to which I beg leave to call your particular attention.

The views which are presented on almost every portion of our naval concerns, and, especially, on the amount of force, and the number of officers, and the general course of policy appropriate in the present state of our country, for securing the great and useful purposes of naval protection in peace, and due preparation for the contingencies of war, meet with my entire approbation.

It will be perceived from the report referred to, that the fiscal concerns of the establishment are in an excellent condition; and it is hoped that Congress may feel disposed to make promptly, every suitable provision desired, either for preserving or improving the system.

The General Post Office Department has continued upon the strength of its own resources to facilitate the means of communication between the various portions of the Union with increased activity. The method, however, in which the accounts of the transportation of the mail has always been kept, appears to have presented an imperfect view of its expenses. It has recently been discovered that from the earliest records of the Department, the annual statements have been calculated to exhibit an amount considerably short of the actual expense incurred for that service. These illusory statements, together with the expense of carrying into effect the law of the last session of Congress, establishing new mail routes, and a disposition on the part of the Head of the Department to gratify the wishes of the public in the extension of mail facilities, have induced him to incur responsibilities for their improvement beyond what the current resources of the department would sustain. As soon as he had discovered the imperfection of the method, he caused an investigation to be made of its results, and applied the proper remedy to correct the evil. It became necessary for him to withdraw some of the improvements which he had made, to bring the expenses of the Department within its own resources. These expenses were incurred for the public good, and the public have enjoyed their benefit. They are now but partially suspended, and that, where they may be discontinued with the least inconvenience to the country.

The progressive increase in the income from postage has equalled the highest expectations, and it affords demonstrative evidence of the growing importance and great utility of this department. The details are exhibited in the accompanying report from the Postmaster General.

The many distressing accidents which have of late occurred in that portion of our navigation carried on by the use of steam power, deserve the immediate and unremitting attention of the constituted authorities of the country. The fact that the number of these fatal disasters is constantly increasing, notwithstanding the great improvements which are every where made in the machinery employed, and the rapid advances which have been made in that branch of science, show very clearly that they are in a great degree the result of criminal negligence on the part of those by whom the vessels are navigated, and to whose care and attention the lives and property of our citizens are so extensively entrusted.

That these evils may be greatly lessened, if not substantially removed, by means of precautionary and penal legislation, seems to be highly probable: so far therefore as the subject can be regarded as within the constitutional purview of Congress, I earnestly recommend it to your prompt and serious consideration.

I would also call your attention to the views I have heretofore expressed of the propriety of amending the Constitution in relation to the mode of electing the President and the Vice President of the United States. Regarding it as all important to the future quiet and harmony of the people, that very intermediate agency in the election of these officers should

be removed, and that their eligibility should be limited to one term of either four or six years, I cannot too earnestly invite your consideration of the subject.

Trusting that your deliberations on all the topics of general interest to which I have adverted, and such others as your more extensive knowledge of the wants of our beloved country may suggest, may be crowned with success, I tender you in conclusion, the co-operation which it may be in my power to afford them.

ANDREW JACKSON.

Washington, 3d Dec. 1833.

#### CONGRESS—TUESDAY.

In the Senate the message was received, and on motion of Mr. King of Alabama, 5000 copies were ordered to be printed, and 1500 of the accompanying documents.

In the House after electing Thomas B. Randolph Sergeant at arms and reappointing the former doorkeepers, the usual resolutions for appointing Chaplains and furnishing the members with newspapers were adopted.

Mr. Hubbard moved that all the former rules, for the government of the House, be adopted, with the exception of the 56th and 76th. One of his propositions would be to increase the number of the members of the Standing Committees from 7 to 9, and of the other Committees from 3 to 5. He also intended to propose that the members should sit uncovered, until the Speaker should otherwise direct.

Mr. Williams said, that the proposition to sit without hats had often been submitted, and had always been rejected. It had been rejected on the ground that there was no convenient place for putting our hats; but he supposed that those who proposed the change would provide a place. He doubted also, whether we should increase the efficiency of the Committees by increasing their number. He wished time for reflection; and renewed his motion to lay the matter on the table.

Mr. Patton moved that the 9th Rule be also excepted; stating that it was his intention to move a modification of the 9th Rule; to the effect that the Speaker should vote in the first instance, in all cases, and that if the House be equally divided, the question should be lost.

The motion, as modified at the suggestion of Mr. Patton, was agreed to.

WEDNESDAY, DECEMBER 4.

In the Senate, Mr. Sprague, from Maine, and Mr. Calhoun, from South Carolina, appeared in their seats to-day.

The Chair laid before the Senate a communication from the Secretary of the Treasury, enclosing the annual report of the Treasurer of the United States, and a report concerning the removal of the Public Deposits from the U. S. Bank and its branches. 5000 copies of the report, and 1500 copies of the documents, were ordered to be printed.

#### Rhode Island Senators.

Mr. S. Wright offered the following resolution: *Resolved.* That the proceedings of the Legislature of the State of Rhode Island, now upon the table of the Senate, showing the appointment of Elisha R. Potter, as a Senator to represent that State in the Senate of the United States, be referred to a select committee of five Senators to inquire and report upon the claim of the said Elisha R. Potter to the seat in the Senate now occupied by the Hon. Asher Robbins.

Mr. Clay wished the resolution to lie over, because as the rules of the Senate gave to its President the appointment of Committees; and as that functionary was not present, though doubtless good reasons could be given for his absence, he was unwilling that so important a duty should devolve on a substitute. It might, too, in such a case as the present be deemed proper by the Senate to appoint the Committee themselves. Hence he wished for time to reflect. After some discussion, Mr. Wright said, in proposing the resolution, he had supposed that the Committee would be chosen by ballot, and he would not object to the gentleman from Kentucky amending the resolution to that effect. Mr. Clay declined offering an amendment, but said if the resolution were so modified, he would no longer object to taking it up. Mr. Wright said he had no objection to make the modification, and sat down; but soon after rose again, and said he desired it to be understood that he had not intended to change the form of the resolution himself; but, if an amendment should be moved, he would not object to it.

Mr. Clay then moved to lay the resolution on the table.

And it was so ordered without a division.

In the House of Representatives the whole day was spent without any result on the question whether Mr. Moore, claiming to have received the certificates of three out of five sheriffs of the counties comprising his congressional district, should be admitted to his seat, preliminary to the decision whether he or Mr. Letcher be entitled thereto.

[From the Norfolk Herald, of 2d inst.]

"FORTRESS MONROE, 1st Dec. 1833.

"The following is a list of officers and companies embarked on board the ships Herald and Jane, bound to Savannah, for the Alabama expedition:

"Companies A. H. and I. of the 1st Regiment of Artillery; B. and H. of the 3d; A. B. and C. of the 4th.

"The Regiment is commanded by Major Hail, man of the 2d Artillery. His staff is composed as follows:—

Lieut. S. Dusenbury, 1st Art., Gr. Master.  
Lieut. J. Gates, Commissary of Subsistence.  
Lieut. J. B. Johnston, 4th Art., Adj't.  
Asst Surgeons Heiskell and Beny.

#### The Company Officers are—

1st Artillery—Capt. F. Whiting,  
Capt. Giles Porter,  
Capt. H. W. Griewood,  
First Lieutenant Eras. Taylor,  
Second Lieut. Edm'd French, Lorenzo St.  
Groves, and Wm. H. Pettit,  
Brevet 2d Lieut. David B. Harris.

2d Artillery—Capt. Upton C. Frazier,  
First Lieut. Samuel Ringgold,  
First Lieut. Campbell Graham,  
Second Lieut. Wm. Bryant,  
Brevet 2d Lieut. Roswell Lee and John H. Allen.

4th Artillery—Capt. I. H. Gardner,  
Capt. P. H. Galt,  
Capt. J. M. Washington,  
Second Lieut. Franklin E. Hunt,  
Brevet 2d Lieut. J. L. Davis, Alex'r Shiras,  
and Henry Dupont.

"The Regiment is accompanied by the band of the Artillery School of Practice. The companies are nearly full and under good discipline.

"At Savannah the Regiment will take steamboats to Augusta, and from thence to Fort Mitchell, in Alabama, via Milledgeville."

We learn, says the Courier, that a letter has been received from our Consul at Vera Cruz, by a merchant of this place, containing information of the total loss of the United States schooner Porpoise, on the Reefs off Point San Anton Lisa rdo, about 25 miles S. E. of Vera Cruz—all hands safe.

**FEMALE SEMINARY.**—The Poughkeepsie Journal records the following, which we transfer to our columns in approbation of so worthy an enterprise. Let the wealthy and patriotic in every village follow the example by similar union of efforts.

We mention with pride, as an evidence of public spirit now prevailing in our village, that the beautiful residence of Mr. John Lockwood, situated on Mansion and Garden streets, was purchased a few days since by an association embracing twelve of our most active and influential citizens, for a FEMALE SEMINARY. The grounds about the house, amounting to about five acres, are elegantly formed and covered with a variety of shade trees, shrubbery, fruits of the choicest variety, &c. &c. constituting altogether a most inviting situation. The house is already spacious, and it is contemplated to erect such additions as will afford ample and convenient accommodations for a large number of young ladies.

The association is composed of the following gentlemen: Nathaniel P. Tallmadge, George P. Oakley, Walter Cunningham, Paraclete Potter, Elias Trivett, Abraham G. Storm, Henry Conklin, Jacob Van Benthuyzen, James Grant, jr. Peter P. Hayes, James Bowne, and Stephen B. Trowbridge. These names are a sufficient guarantee that every thing about the establishment, the edifices, teachers, in short its entire management, will be so arranged and so conducted as to entitle it to a large share of the public confidence and support.

The price paid for the premises, together with another lot of about four acres, lying north of Mr. Geo. P. Oakley's residence, was twelve thousand dollars.



## No. VI.

PITTSBURGH, November 3d.

I passed an evening most agreeably at Wheeling, with two or three prominent members of the Bar, who were distinguished by all that hearty courtesy, and frankness of character, which mark the western Virginian. A venison steak and flask of old Tuscaloosa (the relish, and flavour of which, would have been Tocsin to the soul of Apicius; and made Anacreon uneasy in his grave) gave cordiality to the meeting. It was my first introduction into western society, and I could hardly have been initiated under better auspices as I went under the wing of an Ohio gentleman, whose warm hospitality, and endearing social qualities, united as they are to distinguished professional talents, seem to make him a universal favourite in this region. The conversation, animated, various and instructive, would supply material for a dozen letters. But the nervous expressions, and almost startling boldness, of western conversation would lose half its vividness, and power, when transferred to paper. I found myself however, catching occasionally something of the characteristic tone of those around me, and my new friends gave so encouraging a reception to each fresh fledged sally, that I live in the humble hope, of being able to express myself with sufficient propriety, by the time I reach the really outer west, to prevent people from detecting at once the early disadvantages, I have laboured under, in living so long in a land where every lip lisps homage to mincing Walker, and each tongue trembles in terror of terrible Johnson. In that event I may have both scenes and characters to describe when we meet, such as would now split my pen in telling.

Wheeling is one of the most flourishing places on the Ohio. The immense quantity of bituminous coal in the adjacent region, which may be had merely for the digging, gives it great advantages as a manufacturing place, while the rich back country and favourable position, on the river, especially in low water, when steamboats find Pittsburgh difficult of access, make the town a place of active trade. It lies in two parallel streets, beneath a hill extending along the river, and its smoky purlieus, when viewed from within, except to the eye of the man of business, are any thing but attractive. The principal tavern of the place where I lodged, is well supplied with bedchambers, and parlors, and a comfortable reading room, where the leading papers in the Union are taken. The attendance too, all the servants being blacks, is very good. Among them, a perfect treasure, in the shape of a genuine old Virginian negro, must not be forgotten. The features of Billy, (for that is the name of my sable friend,) are an exact copy of those generally introduced into Washington's picture when he is painted with his favourite groom in attendance; I piqued myself considerably upon discovering the likeness, when I afterwards found that the worthy Æthiop, was actually "raised," as he expressed it, in the Washington family. He is a professing member of the Baptist church, and I was much interested, while talking with the newly converted heathen, (for such he called himself prior to the "change") to find, how the precepts with which he had lately become indoctrinated, assorted with the ideas he had been brought up in as a slave; religion seemed only to have strengthened the bonds which held him to his master. "This new light," he said, "showed the old nigger" (I give his exact words) "that to whatever station God pleased to call him, there it was good for the old nigger to be." I was told that he was rigidly attentive to his spiritual duties, and as for his worldly ones, I never met with a more thorough-bred and respectful servant. He is among the last of a race once numerous in the old dominion, but now fading from the face of the earth. *Sero in cæcum redeas*, and when thy dusky soul takes flight, thy name be immortal Billy, let thy statue, carved in ebony, be set up in Hudson's door-way, and a memoir of thy life flare in each intelligence office in the Union.

It was with no slight regret, that I parted with my friend S. when stepping aboard a pretty steamboat, called the *Gazelle*, to take my passage up the river; his foreign travel, and various opportunities, have given him habits of observation, which with a dash of humour, and ready flow of fine spirits, constitute a capital travelling companion. His literary tastes are well known to you, and I should not be surprised if at a future day, he should distinguish himself as another member of his family has so happily done, by committing to the press a few notes of his wanderings. I left him waiting for the downward boat, and we parted, promising to meet again in a few months at New-Orleans—each of us in the meantime traversing regions, from which the kingdoms and principalities of Europe, might be carved out, and never missed.

The snow of yesterday, yet covered the ground, as I rubbed along the shores of the Ohio, and those pictured woods, with the morning sun gleaming through their tall stems, and glistening on the powdered tree tops, were indescribably beautiful. The islets, particularly where the hues of the foliage were most vivid, shone like shields of silver blazoned with no mortal heraldry. Before noon, however, the sun, like a hungry lap-dog over a basin of ice-cream, licked up every particle of earth's fragile covering. The warm mist of Indian summer succeeded, the river became like glass, every island floated double upon its bosom, and each headland seemed to drop its cliffs against a nether sky. The harsh panting of our high-pressure engine, or the sud-

den flapping of a duck's wing, as he rose suddenly from under the bow of the boat, were the only sounds abroad. The day so still, so soft, and summery, seemed like the sabbath of the dying year.

The evening came on calm, and mellow, and the broad disc of the moon, slept as quietly on the fair bosom of the Ohio, as if her slumbers there had never been broken by the war-whoop, or reveille, from the shadowy banks around.

The peculiar scenery of the Ohio, has been so graphically described by Flint, and Hall, in their various writings upon the West, that I will not detain you by dwelling minutely upon its features. The prominent characteristics of the river are, a clear winding current, studded with alluvial islands, and flowing between banks, which now lie in a level expanse of several hundred acres, elevated perhaps fifty feet above the water, and again swell boldly from the margin to the height of three or four hundred feet in headlands, which, when the mists of evening settle upon the landscape wear the appearance of distant mountains; when I add that an occasional farm house, with its luxuriant orchards, and other enclosures, may be found along the smaller "bottoms," while the larger ones, are frequently enlivened by a bustling village, reposing in their ample bosoms, you have the main features of the Ohio, as I have seen it between Wheeling and Pittsburgh. The windings of the river present at every turn, some of the most beautiful views in the world, but the regular alternations of "bluff," and "bottom," give such a sameness to the landscape, that unless familiar with the points of the country around, one might be dropped in a dozen different places along the river, and not be aware of a change in his situation. Nature seems to have delighted in repeating again and again, the same lovely forms, into which she first moulded this favourite region.

We passed Rapp's flourishing settlement, called Economy, during the day, but only near enough to see the regular arrangement of the square brick dwellings, standing about twenty feet apart, on broad streets which intersect each other at right angles; the factories with their high cupolas; and the thriving orchards, and young vineyards, which stretch along the banks of the river beyond the suburbs. I may hereafter, if I have time to visit it, give you some account of the present condition of this settlement, which as you know belongs to a society organized upon Mr. Owen's plan. The site of the town was formerly a favorite rallying point for the Delaware Indians, under their chief *Mouahatocka*, whose council fires once blazed where now the smoke of a dozen factories rolls from the chimneys of the German emigrant. What a contrast between the toilsome race whose clanking machinery, is now the only sound that greets the ear as you near the shore, and the indolent savage, or laughter-loving Frenchman, who once stalked along the borders or danced over the bosom of the beautiful river.

"How changed the scene since merry Jean Baptiste

"Paddled his pirogue on La Belle Rivière,

"And from its banks some lone Loyola Priest

"Echoed the night song of the voyageur."

The afternoon sun shone warmly on the eastern bank of the river, where the increasing number of farm houses, and occasionally a handsome seat tastefully planted among them, with its hanging garden, not unfrequently kissed by the current of the river, indicated our approach to the city of Pittsburgh—the eastern head of the Mississippi Valley, and the key to the broad region bathed by its waters. Our course lay for a few moments among islands, that seemed to bloom in never-dying verdure, and then as we escaped from their green tincture, the tall cliffs of the Monongahela, blackened by the numerous furnaces, that smoke along their base, and pierced in various points with the deep coal shafts that feed their fires, frowned over the placid water. It was just sunset, and the triangular city, with its steeples peering through a cloud of dense smoke, and its two rivers spanned each by a noble bridge, that seem when thus reviewed, a reflection of each other—lay before us. On the right, the calm and full tide of the Monongahela, flowing beneath rocky banks, some three hundred feet in elevation, was shaded by the impending height, and reflected the blaze of a dozen furnaces in its sable bosom.

On the left, the golden tints of sunset still played over the clear pebbly wave of the Alleghany, and freshened the white outline of a long low-built nunnery, standing on a sudden elevation back from the river. The dusty city lay in the midst, the bridges springing from its centre terminating the view up both rivers; whilst the mists of evening were rapidly closing in, upon the undulating country that formed the back ground of the picture. Truly, the waters have here chosen a lovely spot for their meeting, and it was but natural that such a stream as the Ohio should spring from such an union. Looking backward now, I could see that river, like a young giant rejoicing in its birth, sweeping suddenly on its course, but turning every moment among its green islands, as if to look back till the last upon the home of its infancy.

We entered the Monongahela, and disembarked a few hundred yards from the site of the old fort Duquesne. The river was some twenty-five feet lower than usual, and giving my baggage to a dray-man in attendance, I ascended the bank, and soon found my way through streets, which though neither broad nor cheerful-looking are still well-built, to the Exchange Hotel on the opposite side of the town. Here I am now housed, and after delivering my letters, and looking farther about the place, you shall have the result of my observations.

**Another Steamboat Disaster.**—The Steamboat Mount Vernon, on her way from Cincinnati to St. Louis, about thirty miles above the mouth of the Ohio, collapsed a flue, by which circumstance three persons were immediately killed, and a number of others scalded.

**Narrow Escape.**—A letter from Milledgeville, (Geo.) under the date of the 17th inst. says—"We had a very narrow escape from fire. The roof of the State House caught about one o'clock yesterday supposed by sparks from the chimney—fortunately, it was extinguished without any very serious damage being done." The Augusta Courier remarks—"The roof of the Representatives' Chamber at Milledgeville was very much injured by fire, and the public papers, in the alarm, thrown into confusion. The Legislature speaks of adjourning in consequence for 8 or 10 days." [A negro boy named Sam, was "the principal and efficient actor" in saving the building.—Would it not be well for the Legislature to purchase his freedom?]

**The Cotton Crop.**—We find in the North Carolina Observer, a condensed statement, showing the quantity of Cotton grown and consumed in, and exported from, the United States, during the year ending 30th September, 1833. Believing it will possess interest for many of our readers, we give it a place in our columns.

The exports from New Orleans reach the enormous total of 416,877 bales, but deduct from this 14,749 bales of the crop of the previous year, &c. it leaves.....	bales 403,443
(Same period 1832, 329,635.)	
The exports from Florida.....	23,641
(Same period 1832, 22,651 bales.)	
Exports from Alabama.....	129,366
(Same period 1832, 196,991.)	
Exports from Georgia.....	271,035
(Same period 1832, 276,437.)	
Exports from South Carolina.....	181,876
(Same period 1832, 173,872.)	
Exports from North Carolina, (of which only 517 bales went to foreign port,).....	30,258
(Same period 1832, 28,462.)	
Exports from Virginia.....	30,899
(Same period 1832, 37,500.)	
Total crop of 1833.....	1,070,438
Total crop of 1831.....	987,477
Increase.....	82,961
The total exports to foreign ports.....	867,435
(Of which 630,245 bales were to England.)	
Ditto last year.....	891,728
Decrease.....	24,293

Consumption in the United States.	
Quantity consumed, in 1832-3.....	194,412 bales.
do 1831-2.....	173,800
do 1830-1.....	182,148
do 1829-30.....	126,512
do 1828-9.....	111,850
do 1827-8.....	120,573
do 1826-7.....	103,483

N. B. The quantity taken for home manufacture, as shown by the above statement, does not include any Cotton spun in the Cotton growing States. We have no means of ascertaining the quantity taken for domestic use in the States South and West of the Potomac, and if we had, we are not aware of any practical use that could be made of the information.

Growth.	
Total crop of 1834-5.....	560,000 bales.
do 1835-6.....	719,000
do 1836-7.....	937,000
do 1837-8.....	857,744
do 1838-9.....	976,845
do 1839-30.....	1,038,848
do 1830-31.....	987,478
do 1831-32.....	1,070,438
do 1832-33.....	

**LATER FROM LISBON.**—By the arrival at Boston of the *Dromo*, and at this port of the *Cliftus*, from St. Ubes, we have accounts from Lisbon to 26th ult. The extent of Don Pedro's circuit around Lisbon was gradually enlarging, as the Miguelite forces retired. The following letter from the house of the American Consul, shows how important in the way of supplies was the consequence of this retreat of the Miguelites:

LISBON, Oct. 19.

Since we last wrote you on the 9th inst. the army of Don Miguel has been attacked and beaten, and has retreated about 50 miles from this, so that all the mills are now in the possession of Don Pedro, and as the quantity of wheat on hand is great, and more coming from the country daily, and large quantities of flour arriving from England and France, we look daily for a decree rescinding the admission of Flour. Your obedient servants,

J. P. HUTCHINSON &amp; Co.

The Queen had been proclaimed at Estremadura, and it was reported that Coimbra had declared in her favor. Everything was going on well at Lisbon. Don Pedro had been confined a few days to the Palace by slight indisposition, but had recovered, and was as active as ever.



## NEW-YORK AMERICAN.

NOVEMBER 30, DECEMBER 2, 3, 4, 5, 6—1833.

## LITERARY NOTICES.

**THE HAND, its Mechanism and Endowments, as concerning design,** by SIR CHARLES BELL, &c. &c.—Philadelphia, CAREY, LEA & BLANCHARD.—Another of the Bridgewater treatises—liable to the same objection which all that have preceded it have called forth—that of running into other subjects than the one which it professes to treat exclusively; yet like all the rest, though wanting in unity, full of most valuable and instructive knowledge. The eminent surgeon who in this book puts before us the stores of long experience, apologizes at the outset for the style in which it is written, on the ground that he has been always too much absorbed in the practical details of his profession, to have had much time for the cultivation of mere literature. The apology was unnecessary, for though not a model for critics, his style is upon the whole less rugged, and more intelligible, than that of his literary and strong-minded collaborator, *Chalmers*. The high tone of moral and religious feeling which pervades this work, shows that the selection of Sir Charles Bell for such an elucidation of the great subject prepared by the Earl of Bridgewater, was most judicious, as his manner of occasionally introducing views appropriate to his task, is ingenious. Take for instance the following extract, in which gratitude, the peculiar attribute of man, is viewed as the basis of religion:

It is this sense of gratitude which distinguishes man. In brutes, the attachment to offspring for a limited period is as strong as in him, but it ceases with the necessity for it. In man, on the contrary, the affections continue, become the sources of all the endearing relations of life, and the very bonds by which society is connected.

If the child, upon the parent's knee, is unconsciously incurring a debt, and strong affections grow up so naturally that nothing is more universally condemned than filial ingratitude, we have but to change the object of affection, to find the natural source of religion itself. We must show that the care of the most tender parent is in nothing to be compared with those provisions for our enjoyment and safety, which it is not only beyond the ingenuity of man to provide, but which he can hardly comprehend, while he profits by them.

If man, of all living creatures, be alone capable of gratitude, and through this sense be capable also of religion, the transition is natural; since the gratitude due to parents is abundantly more owing to Him "who saw him in his blood, and said, Live."

For the continuance of life, a thousand provisions are made. If the vital actions of a man's frame were directed by his will, they are necessarily so minute and complicated, that they would immediately fall into confusion. He cannot draw a breath, without the exercise of sensibilities as well ordered as those of the eye or ear. A tracery of nervous cords unites many organs in sympathy, of which, if one filament were broken, pain and spasm, and suffocation would ensue. The action of his heart, and the circulation of his blood, and all the vital functions are governed through means and by laws which are not dependent on his will, and to which the powers of his mind are altogether inadequate. For had they been under the influence of his will, a doubt, a moment's pause of irresolution, a forgetfulness of a single action at its appointed time, would have terminated his existence.

Now, when man sees that his vital operations could not be directed by reason—that they are constant, and far too important to be exposed to all the changes incident to his mind, and that they are given up to the direction of other sources of motion than the will, he acquires a full sense of his dependence. If man be fretful and wayward, and subject to inordinate passion, we perceive the benevolent design in withdrawing the vital motions from the influence of such capricious sources of action, so that they may neither be disturbed like his moral actions, nor lost in a moment of despair.

Ray, in speaking of the first drawing of breath, delivers himself very naturally: "Here methinks, 'appears a necessity of bringing in the agency to 'some superintendant intelligent being, for what 'else should put the diaphragm and the muscles 'serving respiration in motion all of a sudden so 'soon as over the fetus is brought forth? Why

could they not have rested as well as they did in 'the womb? What aileth them that they must 'needs bestir themselves to get in air to maintain 'the creature's life? Why could they not patiently 'suffer it to die? You will say the spirits do at 'this time flow to the organs of respiration, the 'diaphragm, and other muscles which concur to 'that action and move them. But what raises the 'spirits which were quiescent, &c., I am not subtle enough to discover."

We cannot call this agency, a new intelligence different from the mind, because, independently of consciousness, we can hardly so define it. But there is bestowed a sensibility, which being roused (and it is excited by the state of the circulation,) governs those muscles of respiration, and ministers to life and safety, independently of the will.

When man thus perceives, that in respect to all these vital operations he is more helpless than the infant, and that his boasted reason can neither give them order nor protection, is not his insensibility to the Giver of these secret endowments worse than ingratitude? In a rational creature, ignorance of his condition becomes a species of ingratitude; it dulls his sense of benefits, and hardens him into a temper of mind with which it is impossible to reason, and from which no improvement can be expected.

Debased in some measure by a habit of inattention, and lost to all sense of the benevolence of the Creator, he is roused to reflection only by overwhelming calamities, which appear to him magnified and disproportioned; and hence arises a conception of the Author of his being more in terror than in love.

Again in the annexed vindication of the necessity of pain:

It affords an instance of the boldness with which philosophers have questioned the ways of Providence, that they have asked—why were not all our actions performed at the suggestion of pleasure? why should we be subject to pain at all? In answer to this I should say, in the first place, that consistently with our condition, our sensations and pleasures, there must be variety in the impressions; such contrast and variety are common to every variety of sense; and the continuance of an impression on any one organ, occasions it to fade. If the eye continue to look steadfastly upon one object, the image is soon lost—if we continue to look on one color, we become insensible to that color, and opposite colors to each other are necessary for an impression. So have we seen that in the sensibilities of the skin variations are necessary to continued sensation.

It is difficult to say what these philosophers would define as pleasure, but whatever exercise of the senses it should be, unless we are to suppose an entire change of our nature, its opposite is also implied. Nay, further, in this fanciful condition of existence, did anything of our present nature prevail, emotions purely of pleasure would lead to indolence, relaxation, and indifference. To what end should there be an apparatus to protect the eye, since pleasure could never move us to its exercise? Could the windpipe and the interior of the lungs be protected by a pleasurable sensation attended with the slow determination of the will—instead of the rapid and powerful influence which the exquisite sensibility of the throat has upon the act of respiration, or those forcible yet regulated exertions, which nothing but the instinctive apprehension of death could excite?

To suppose that we could be moved by the solicitations of pleasure and have no experience of pain, would be to place us where injuries would meet us at every step, and in every motion, and whether felt or not, would be destructive to life. To suppose that we are to move and act without experience of resistance and of pain, is to suppose not only that man's nature is changed, but the whole of exterior nature also—there must be nothing to bruise the body or hurt the eye, nothing noxious to be drawn in with the breath: in short, it is to imagine altogether another state of existence, and the philosopher would be mortified were we to put this interpretation on his meaning. Pain is the necessary contrast to pleasure: it ushers us into existence or consciousness: it alone is capable of exciting the organs into activity: it is the companion and the guardian of human life.

In the paragraph which follows an argument is presented against that combination of fortuitous atoms from which materialists have sometimes maintained man might be formed, which is alike new and striking:

The bones of large animals and in great variety, are found imbedded in the surface of the earth.—They are discovered in the beds of rivers, they are found where no waters flow, they are dug up from

under the solid limestone rock. The bones thus exposed, become naturally a subject of intense interest, and are unexpectedly connected with the inquiry in which we are engaged. Among other important conclusions, they lead to this—that there is not only a scheme or system of animal structure pervading all the classes of animals which inhabit the earth, but that the principle of this great plan of creation was in operation, and governed the formation of those animals which existed previous to the revolutions that the earth itself has undergone: that the excellence of form now seen in the skeleton of man, was in the scheme of animal existence long previous to the formation of man, and before the surface of the earth was prepared for him or suited to his constitution, structure, or capacities.

In the last quotation which we have room for, from a book which we recommend, as quite intelligible to all readers, as it certainly is instructive, reference is made to the opinions (erroneous it seems they were) of President Jefferson, concerning the *Megalonix*:

I have alluded to the observations of President Jefferson on the *Megalonix*. Having found a bone which by its articulating surface and general form, he recognized to be one of the bones of the phalanx of an animal of great size, he thought he could discover that it carried a claw; and from this circumstance, he naturally enough concluded (according to the adage—*ex ungue leonem*) that it must have belonged to a carnivorous animal. He next set about calculating the length of the claw, and estimating the size of the animal. He satisfied himself that in this bone, a relic of the ancient world, he had obtained a proof of the existence, during these old times, of a lion of the height of the largest ox, and an opponent fit to cope with the mastodon. But when this bone came under the scrutiny of Baron Cuvier, his perfect knowledge of anatomy enabled him to draw a different conclusion.

He first observed that there was a spine in the middle of the articulating surface of the last bone, which in this respect was unlike the form of the small bone in the feline tribe. He found no provision in this specimen of an extinct animal, for the lateral attachment of the bone, which we have just noticed to be necessary for its retraction. Then observing what portion of a circle this bone formed, he prolonged the line, and showed that the claw belonging to it must have been of such great length, that it could never have been retracted to the effect of guarding an acute and sharp point. The point, therefore, could not have been raised vertically, so as to have permitted the animal to put the foot to the ground without blunting the instrument! Pursuing such a comparison, he rejected the idea of the bone belonging to the feline tribe at all. His attention was directed to another order, the *pareseux* or sloths, which have great toes and long nails. Their nails are folded up in a different fashion; they just enable the animal to walk; but slowly and awkwardly, something in the same manner as if we were to fold our fingers on the palm of the hand, and bear upon our knuckles. On instituting a more just comparison between these bones of the ancient animal, and the corresponding bones of the *pareseux*, he has satisfied us, that the lion of the American President was an animal which scratched the ground and fed on roots.

One experiences something like relief to find that there never was such an enormous carnivorous animal as this, denominated *megalonix*.

**LIGHTS AND SHADOWS OF GERMAN LIFE.** 2 vols. Philad. CAREY, LEA & BLANCHARD.—Very pleasant reading, and somewhat out of the usual track. From the "Campaigns of a Man of Peace," we give a short chapter. The new soldier was just escaped from his garret as a teacher, and about to assume the duties of a pastor, when falling in with a Prussian detachment retreating before the victorious arms of Napoleon, he is suddenly converted into an Adjutant-General of an army of some 200 men:

On the third night of our march we took up our quarters at a little village, and having posted the advanced guards, we sat down—the commander-in-chief, the carabinier, and I, to supper. "We are, in fact," said the former, with complacency, "operating in the rear of Napoleon as I intended."

"It is all very well," replied the carabinier, drily, "provided he does not operate on our rears tomorrow."

I felt my flesh creep at the possibility conveyed in this barbarous *jeu de mots*, and we were all three absorbed in the unpleasant reflections it suggested, when several shots, one after the other, accompanied



by loud shouts of "the French! the French!—to arms!—to arms!" made us start from our seats, and stand looking at one another as stiff and motionless as the candles on the table.

The drums rattled, the four trumpeters blew with all their might, and the carabinier turned pale as death. To disguise my terror, I stamped about the room, crying, "Hollo! fire! fire, brave Prussians—fire!" trying all the time to find the door—but I saw nothing. It was as if I had been suddenly struck blind, and in my agony I burst open the cupboard of the hostess, calling out louder and louder; "This way, brave Prussians—this way—stick close to me!"

The old woman ran screaming to protect her property—the children shouted—the dogs barked—and a cat, on whose tail I had trodden, sprang over my head with a hideous yell, to the top of the stove.

The din and confusion which reigned around increased my panic, and I fully believed that the French were already in the room, mercilessly butchering the women and children.

"If ever I got out of this scrape," thought I, "let who will be adjutant-general in my place!"

My outrageous proceedings, which, fortunately for me, were most honorably interpreted by the commander and the petrified carabinier, inspired them with new courage. They drew their swords, and sallied forth to the troops, who had assembled outside the little inn. I followed, and it was with unspeakable joy that I felt myself in the dark; no eye saw me, and I might effect a retreat, which at least would prolong my life, if it did not illustrate my name. Though more disposed to be nervous at night than by day, I cannot call myself fearful; but on this occasion I was overcome with terror.

"Adjutant—forward—with twenty men to the church-yard! roared the lieutenant. "Our post is there attacked—if you should need succors, send to me."

The twenty men were soon in motion, and I, most unhappy doctor of moral philosophy, with a drawn sword at their head. "The devil's in this fellow," thought I, "has he forgotten that my hand has never wielded ought but pen, pencil or compass, that he should select me upon such a service?"

But it sufficed for him to suppose that I possessed courage; and my sense of honor inspired me for a moment, with enough of that quality to carry me to the post I was ordered to defend.

"Nunc animus opus, Ansa, nunc pectore firmo!  
Degenere animos timor arguit."

With these and similar exclamations, which were wont to inflame me with enthusiasm in my lonely garret, I endeavored to whip up my fainting spirits. But a dimness came over my sight as we advanced, which was the cause of my taking the venerable wall of the churchyard for the enemy's line, and the grass which grew upon its top, and waved to and fro in the wind; for their bayonets. I sprang to one side, and cried, with all the energy of terror: "Fire! fire! fire!" The men obeyed, and the flash of their muskets afforded a distinct view of the imagined foe.

"Quarter!—quarter!" cried several voices at once, and seven French light infantry soldiers crept out from under the wall, where they had lain concealed, and surrendered their arms. Had the fools remained quiet we should never have discovered them. We accordingly conducted our prisoners to head quarters, and the pride with which I marched them up to the commander-in-chief may easily be imagined.

He embraced me in the presence of all the troops, who were drawn up by the light of the stable lanterns and blazing pine-branches, before the inn door.

"Here, Adjutant-general," said he, with great solemnity, "you have distinguished yourself equally by your bravery and prudence, and you may depend upon my reporting this brilliant affair to his majesty in the most advantageous terms."

We learnt from the Frenchmen that a light company had been ordered to take up their quarters in the village; but on finding it unexpectedly occupied, as they believed from the uproar of our drums and trumpets, by a considerable body of Prussians, they had precipitately retreated, leaving behind them the seven prisoners, who had imprudently ventured too far a-head of their companions.

In my joy, I regaled my prisoners with the best of that was to be had; they were the first of Napoleon's heroes whom I had seen. While the scoundrels thanked me for their good cheer, I felt as though I might stand in need of their protection, since, in answer to my inquiry, whether there were many French in the neighborhood, they informed me that Davoust was on his march, with a whole division, from Saxony to Berlin.

I hurried with this news to my General, but Charlemagne, elevated by this first victory of his

troops, he only rubbed his hands, and poured forth a volley of genuine German oaths, expressive of his delight. "Sapperment!" said he, "I am then really operating in the rear of the French army!"

The carabinier on the contrary, looked discomfited, he shrugged his shoulders (knocked the ashes out of his pipe, and said nothing.

THE DOWN EASTERS, by JOHN NEAL. 2 vols.

New York: HARPER & BROTHERS.—We have seen this book much praised, and we marvel at it. We have read it through—that is the volume and a half which comprise the first story: the "balaam," as Blackwood calls it, thrown in to fill out the second volume, we did not read. The design of the author is to give a faithful portraiture of the Yankee, as he was; for already he insists the *genuine native* has all but ceased to exist. So far as fidelity to peculiarities of idiom and even of conduct are concerned, this may be, for aught we know, a well executed sketch—for the author is undoubtedly a quick and accurate observer of life;—but as a whole the story is incoherent, its incidents impossible, and their tendency most immoral. As for style, we take it for granted the author would consider it an affront to talk of such a thing, as whenever he means to be most effective, he sets all rules at defiance. Mr. Neal's genius—and genius he certainly has—seems incapable of a sustained effort. In brief sketches he may excel; but in the only two books of his that we have seen—that now before us, and that entitled, we believe, *Authorship*, and published three or four years ago—we think he fails. The *Down Easters*, in our judgment, is in all respects inferior to *Authorship*, and we know not how its perusal is to profit any one.

ELEMENTS OF NATURAL AND EXPERIMENTAL PHILOSOPHY, &c. &c. by the Rev. DAVID BLAIR. Revised and enlarged, &c. by E. A. SMITH. New York: McELRATH, BANGS & HERBERT.—This little treatise, adapted, as the American editor assures us, to the present state of science, and carefully printed and illustrated with engravings, calculated to facilitate the progress of the learner—furnished too, according to the mode so much in vogue, with questions at the bottom of each page, to test the memory, is, we presume, as good an elementary work on general physics as is to be found.

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It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable. They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,

Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyors' Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the Levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewing and Heartt.—As you have asked me to give my opinion of the merits of those Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprise so well merits, I remain, yours, &c.

B. H. LATROBE,

Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them upon application, to any persons desirous of perusing the same.



## METEOROLOGICAL RECORD, KEPT IN THE CITY OF NEW-YORK,

From the 19th to the 25th of November, 1833, inclusive.

(Communicated for the American Railroad Journal and Advocate of Internal Improvements.)

Date.	Hours.	Thermometer.	Barometer.	Winds.	Strength of Wind.	Clouds from what direction.	Weather.
Nov'r. 19..	6 a. m.	29	30.25	NW	moderate		clear
	10	36	30.25	..	..	NW	fair
	2 p. m.	40	30.21	..	..	..	..
	6	37	30.25	..	fresh	..	..
" 20..	6 a. m.	31	30.37	WSW	moderate	w by s	cloudy
	10	35	30.40	NW	..	w	..
	2 p. m.	40	30.42	..	..	..	..
	6	37	30.47	..	..	..	..
" 21..	6 a. m.	32	30.50	NNE	..	..	cloudy
	10	38	30.46	E by N	fresh	..	..
	2 p. m.	44	30.41	SSE	..	SE	..
	6	44	30.35	..	..	..	..
" 22..	6 a. m.	44	30.05	..	moderate	..	rainy
	10	44	30.00	ESE	..	SW	..
	2 p. m.	40	29.95	N	..	..	rain
	6	42	29.90	NNW	..	..	fair
" 23..	6 a. m.	36	29.90	WSW	..	WSW	..
	10	40	29.94	..	..	..	clear
	2 p. m.	46	29.90	w by s	..	..	—smoky
	6	44	29.97	WNW—WSW	..	..	..
" 24..	6 a. m.	40	30.18	..	light	..	cloudy
	10	43	30.19	..	..	..	..
	2 p. m.	46	30.15	w by s—w	moderate	..	cloudy
	6	42	30.15	sw by w	..	..	..
" 25..	6 a. m.	40	29.90	NE by E	moderate	..	hazy
	10	41	29.83	..	fresh	ENE	rain
	2 p. m.	38	29.70	..	..	..	—rain
	6	38	29.60	..	strong	..	..
	10	37	29.58	..	moderate	..	cloudy

Average temperature of the week ending Monday, November 25, 38° 28.

## METEOROLOGICAL RECORD, KEPT AT AVOYLL FERRY, RED RIVER, LOU.

For the month of October, 1833—(Lat. 31.10 N., Long. 91.59 W. nearly.)

(Communicated for the American Railroad Journal and Advocate of Internal Improvements.)

Date.	Thermometer.			Wind.	Weather, Remarks, &c.
1833.	Morn'g.	Noon.	Night.		
Oct'r 1	65	72	68	NW	clear—purple figs fine, gathered the last ripe
" 2	54	72	68	calm	..
" 3	56	78	71	..	—Red River rising
" 4	58	75	71	..	..
" 5	63	78	73	s—light	cloudy—evening, shower—from 8 p. m. steady heavy rain all night
" 6	70	76	68	calm	..
" 7	56	65	62	NE	..
" 8	48	68	61	calm	..
" 9	59	73	63	..	..
" 10	56	73	69	..	..
" 11	60	74	72	s	..
" 12	70	74	67	N—high	..
" 13	52	72	67	calm	..
" 14	59	76	73	s	cloudy—shower at night
" 15	70	80	79	..	..
" 16	76	85	77	..—high	clear—flying clouds—evening showers
" 17	63	70	61	w to NW	cloudy morning—from 10 a. m. clear and high wind
" 18	45	59	55	N	clear—rain at night
" 19	47	57	56	..—light	cloudy
" 20	43	49	44	..—high	clear
" 21	39	50	46	..	..
" 22	33	48	47	..	..
" 23	40	65	63	w—light	..
" 24	54	75	73	..	..
" 25	63	70	58	NE	..
" 26	42	68	61	SE—light	..
" 27	47	73	70	calm	..
" 28	50	63	50	N—high	..
" 29	39	54	49	calm	..
" 30	33	64	54	..	..
" 31	45	67	60	..	..

Red River is now within 11 feet of high water mark—rose this month, 13 feet 2 inches.

## MARRIAGES.

On Wednesday, 27th inst. by the Rev. Dr. Knox, JOHN C. TILLOTSON, Esq. of Rhinebeck, to MATILDA, daughter of the late Wm. Faw. Esq. of this city.

On Monday evening, the 25th instant, at Christ Church, by the Rev. Benjamin Holmes, THOMAS A. TAGGART, Esq., to SARAH W. Eakin, daughter of the late AMANAH DUSENBERRY, of this city.

At South Salem, Westchester county, N. Y., on the 26th instant, RICHARD M. HOB, of the house of Robert Hoe & Co., of this city, to LUOT, only daughter of Mr. JOSIAH GILBERT, of the former place.

## DEATHS.

On Friday evening last, Miss MARIA AMELIA ANABELLA, eldest daughter of EUSTIS FRISVOLD, Esq., aged 16.

Last evening, Nov. 29, of consumption, IRA BARBIT, a soldier of the Revolution, in the 70th year of his age.

At Alexandria, D. C., on Wednesday, the 6th inst., ROBERT J. TAYLOR, in the 19th year of his age.

At Philadelphia, on Friday, the 14th instant, ALEXANDER HENRY WALK, in the 19th year of his age.

These youths were both members of the senior class in the College of New Jersey, and had returned in perfect health to

their respective homes to spend the fall vacation. By a remarkable providence, they were each brought to the grave by an accidental discharge from a gun. Neither was killed instantly; and for several days after their respective injuries they both appeared to be convalescent, when the symptoms of tetanus or lockjaw, appeared, and destroyed the fond hopes previously indulged with respect to their recovery. They were both distinguished for their cheerful and amiable dispositions, possessed of good talents, beloved by their fellow students, and have died lamented by numerous friends and acquaintances.

In Philadelphia, on Thursday of last week, Miss E. ROBERTSON, eldest daughter of the late Col. ISAAC ROBERTSON, of Washington, D. C.

At Buckland, Va. at the seat of Luke Kastaret, Esq., Mrs. CATHERINE SHANNAMAN, at the advanced age of 110 years. She came to Baltimore from Lancaster, Pa. when there was but three houses in that city, and resided here until the last three years. She retained the faculties of her mind until about a year ago, and her eye-sight until the last moment of her life.

On Monday morning last, at the residence of Mr. Wm. Grant, of Jefferson county, Va. the Rev. BENJ. BURN, of the M. E. Church, in the 64th year of his age. The decease of this venerable and good man was hastened by a severe injury which he sustained by being thrown from his gig on Tuesday, the 12th inst.

At Norwich, (Connecticut), on the 27th November, DANIEL L. CORN, Esq. in the 80th year of his age.

## LOCOMOTIVE ENGINES.

THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company, WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, page 772 of this Journal. d6

## RAILWAY IRON.

Ninety-five tons of 1 inch by 1 inch, Flat Bars in length of 14 to 15 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails soon expected.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

The above will be sold free of duty, to State Governments, and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.

9 South Front street, Philadelphia. Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. 073mowr

## SURVEYORS' INSTRUMENTS.

Compasses of various sizes and of superior quality, warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 164 Water street, J31 6t corner of Maiden lane.

## ENGINEERING AND SURVEYING INSTRUMENTS.

The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new; among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, new in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sight, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES F. STABLER, Superintendent of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.

Germantown, and Norrist. Railroad